

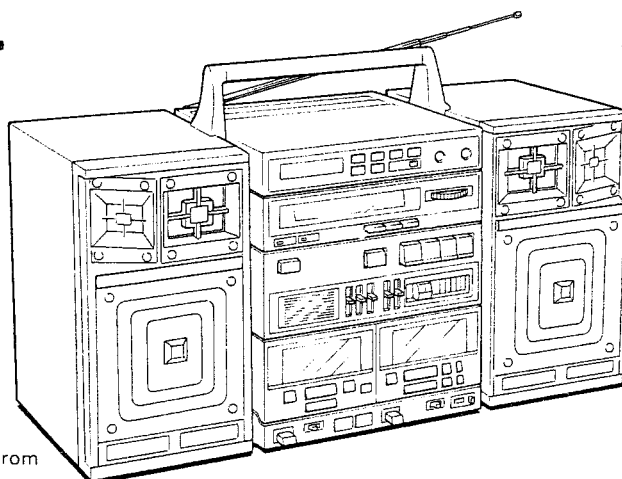
SONY

FH50WX

MODEL

SERVICE MANUAL

SERVICE MANUAL



*AEP Model
UK Model*

Dolby noise reduction manufactured under license from
Dolby Laboratories Licensing Corporation.
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Dolby Laboratories Licensing Corporation.

CONTENTS

FH-55W

	<i>Page</i>
SPECIFICATIONS	2
FEATURES	3
MODEL IDENTIFICATION	3
FUNCTION OF CONTROLS	4
CONNECTOR'S SIGNAL ASSIGNMENT	7
EXPLODED VIEW AND PARTS LIST	8

WARNING !!

ADVARSEL!

Lithiumbatteri – Eksplosionsfare
Udskiftning må kun foretages
af en sagkyndig, og som
beskrevet i servicemanualen.

LITHIUM BATTERY

SHOULD ONLY BE CHANGED BY TECHNICAL
PERSONNEL. THERE IS A RISK FOR EXPLOSION
AT A WRONG HANDLING.

"Batteriet må kun udskiftes med et batteri af samme
fabrikat og type".

Because of the risk for explosion the battery must
be replaced with the same type and manufacture.

STR-55D

	<i>Page</i>
1. BLOCK DIAGRAM	STR-1
2. DISASSEMBLY	STR-3
3. DIAL POINTER REINSTALLATION ..	STR-5
4. ADJUSTMENTS	STR-6
5. MOUNTING DIAGRAM	STR-9
6. SCHEMATIC DIAGRAM	STR-13
SEMICONDUCTOR LEAD LAYOUTS	STR-16
7. EXPLODED VIEWS AND PARTS LIST	STR-17
8. ELECTRICAL PARTS LIST	STR-20

— Continued on page 2 —

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK
⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE
PARTS LIST ARE CRITICAL TO SAFE OPERATION.
REPLACE THESE COMPONENTS WITH SONY PARTS
WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS
MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.



**COMPACT HI-DENSITY
COMPONENT SYSTEM
SONY®**

AUD

TC-55W

Page

REPAIRING PRECAUTION	TC-2
SECTION 1 BLOCK DIAGRAM	TC-3
SECTION 2 DISASSEMBLY	TC-5
SECTION 3 ADJUSTMENTS	
3-1. MECHANICAL ADJUSTMENTS	TC-9
3-2. ELECTRICAL ADJUSTMENTS	TC-10
Semiconductor Lead Layouts	TC-13
SECTION 4 DIAGRAMS	
4-1. MOUNTING DIAGRAM	TC-14
4-2. SCHEMATIC DIAGRAM	TC-19
-SYSTEM CONTROL SECTION-	
4-3. SCHEMATIC DIAGRAM	TC-23
-AUDIO SECTION-	
SECTION 5 EXPLODED VIEWS AND PARTS LIST	TC-27
SECTION 6 ELECTRICAL PARTS LIST	TC-30

SPECIFICATIONS

STR-55D FM stereo/FM-AM receiver

FM tuner section

Tuning range	87.5 - 108 MHz
Antenna	Telescopic antenna
Antenna terminal	75-ohm unbalanced
Intermediate frequency	10.7 MHz
Usable sensitivity	3 μ V (S/N = 30 dB/75-ohm)
Signal-to-noise ratio	75 dB (mono) 70 dB (stereo)
Harmonic distortion at 1 kHz	0.5% (mono) 1% (stereo)
Separation at 1 kHz	40 dB
Selectivity	55 dB at 400 kHz

MW/LW tuner section

	MW	LW
Tuning range	522 - 1,611 kHz	144 - 288 kHz
Antenna	Built-in ferrite bar antenna, External antenna terminal	
Intermediate frequency	450 kHz	
Usable Sensitivity	Built-in ferrite bar antenna 250 μ V/m (999 kHz)	500 μ V/m (230 kHz)
	External antenna 100 μ V (999 kHz)	150 μ V (230 kHz)
Signal-to-noise ratio	52 dB (50 mV/m)	
Harmonic distortion	0.5% (50 mV/m, 400 Hz)	
Selectivity	30 dB (9 kHz)	40 dB (9 kHz)

APM-117D

Page

1. DISASSEMBLY	APM-1
2. WIRING DIAGRAM	APM-1
3. EXPLODED VIEW AND PARTS LIST	APM-1

Amplifier Section

Continuous RMS power output	18 + 18 watts (4-ohm, 40 Hz - 20 kHz, 1% THD)
	25 + 25 watts (4 ohms, 1 kHz, 5% THD)

DC operation (with the EBP-86 or car battery)
3.5 W + 3.5 W (1 kHz, 5% THD)

Inputs	Sensitivity	Impedance
PHONO (phono jacks)	2.5 mV	50 k-ohm
CD/AUX (phono jacks)	250 mV	50 k-ohm
MIC (phone jack)	1 mV	Low impedance

Outputs

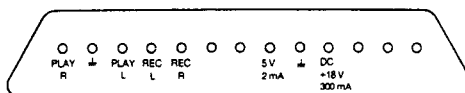
PREOUT (phono jacks)	Voltage 250 mV, impedance 4.7 k-ohm
HEADPHONES (stereo phone jack)	Accepts headphones of 8-ohm or more
SPEAKER	Accepts speakers of 4 - 16-ohm

Frequency response

PHONO: RIAA curve ± 0.5 dB
CD/AUX: 40 Hz - 30 kHz ± 0.5 dB
MIC: 100 Hz - 10 kHz ± 0.5 dB

General

Dimensions	Approx. 215 \times 165 \times 220 mm (w/h/d) (8 1/2 \times 6 1/2 \times 8 3/4 inches) incl. projecting parts and controls
Weight	Approx. 3.4 kg (7 lb 8 oz) net
	13-pin DC output connector of STR-55D to TC-55W



TC-55W Stereo cassette deck

Recording system	4-track 2-channel stereo
Frequency response	DOLBY NR OFF (DIN) with TYPE IV cassette (Sony METAL-ES) 50 - 15,000 Hz (± 3 dB) with TYPE II cassette (Sony UCX-S) 50 - 14,000 Hz (± 3 dB) with TYPE I cassette (Sony HF-S) 50 - 13,000 Hz (± 3 dB)
Wow & flutter	0.08% WRMS $\pm 0.2\%$ (DIN)
Dimensions	Approx. 220 \times 115 \times 265 mm (w/h/d) (8 3/4 \times 4 1/2 \times 10 1/2 inches) incl. projecting parts and controls
Weight	Approx. 2.8 kg (6 lb 3 oz) net

Tape Transport	TCM-CMAY A-1 (A DECK)
Mechanism Type	TCM-CMAY B-7 (B DECK)

OdB = 0.775V

APM-117D Speaker

System	3-way speaker system
Speaker units	Woofer: 77 cm ² APM type Tweeter: 5 cm cone type Super tweeter: 3.5 cm cone type
Enclosure type	Bass reflex
Frequency range	60 Hz - 20 kHz
Sensitivity	89 dB (1W, 1m)
Impedance	4-ohm
Dimensions	Approx. 170 \times 280 \times 220 mm (w/h/d) (6 3/4 \times 10 7/8 \times 8 3/4 inches)
Weight	Approx. 3 kg (6 lb 10 oz) net per speaker

General

Power requirements	AEP model: 220 V ac, 50/60 Hz UK model: 240 V ac, 50 Hz
Power consumption	AEP model: 65W UK model: 125W

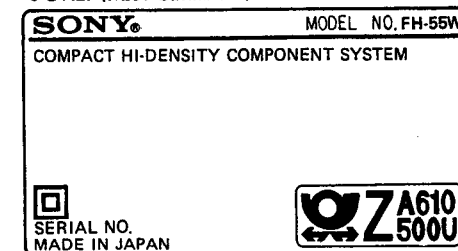
MODEL IDENTIFICATION

(TC-55W and APM-117D have no differences among AEP, G-AEP UK models.)

- Specification Label (carved on jack plate) -

STR-55D

• G-AEP (WEST GERMANY) model



FEATURES

Compact hi-density component system

Consists of an FM stereo/FM-AM receiver and a high quality double cassette deck, which are securely connected by a flat connecting cord.

Receiver section

- Amplifier with power output of 25W + 25W (1 kHz, 5% THD)
- High sensitivity and high selectivity tuner
- Dynamic Optimum Loudness (DOL) button to emphasize bass sound.
- Includes a digital timer for awakening and sleeping to radio or taped program, a 3-band graphic equalizer for both recording and playback with 3-band spectrum analyzer

Double cassette deck

- Deck A for playback only and deck B for recording and playback
- One side of the cassette can be duplicated either at normal or high speed
- Automatic tape select system
- Automatic Music Sensor (AMS) and blank skip function button for both decks A and B
- Relay play of two cassettes

3-way speaker system with APM woofer

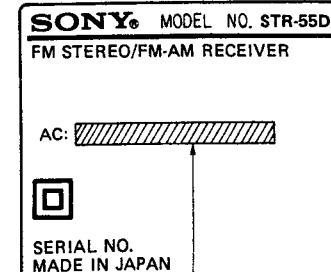
By installing speaker boxes in the appropriate position, the localization of the sound can be arranged to fit your listening situation.

Three different power sources

House current, car battery and batteries (with an optional battery case)

Note: The timer function does not operate when the system is operated on batteries. The dial scale and the spectrum analyzer display are not lit in this case.

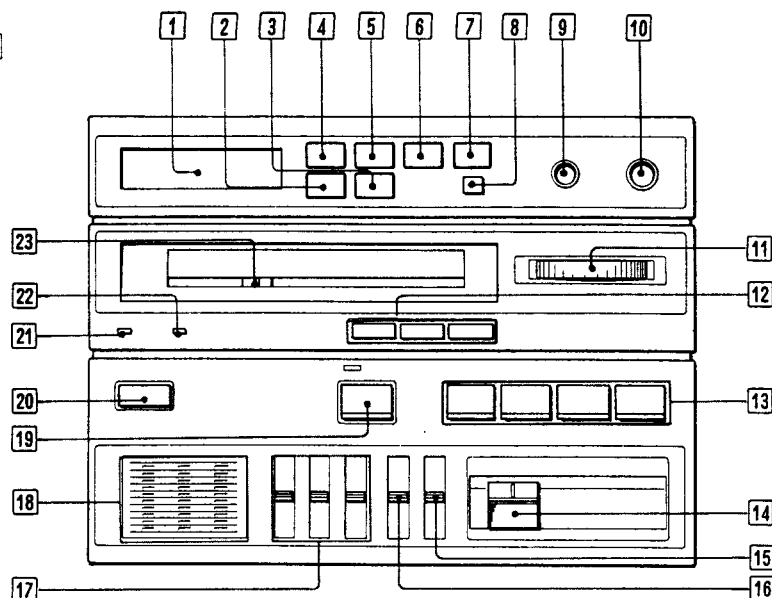
• AEP model except for G-AEP, UK model



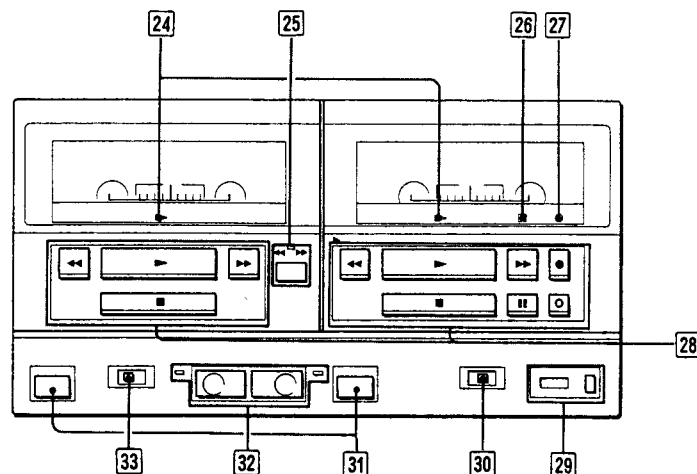
AEP model: 220V~50/60Hz 65W
UK model: 240V~50Hz 125W

FUNCTION OF CONTROLS

STR-55D



TC-55W



STR-55D FM Stereo/FM-AM receiver

- 1 DIGITAL TIMER display**
Lights when the FH-55W is turned ON during AC operation.
- 2 SLEEP SET button**
While keeping this button depressed, push the MINUTE button to set the sleep timer.
The digits on the DIGITAL TIMER display are reduced by one from 64.
The power will be turned off automatically after the preset time has elapsed.
- 3 SLEEP OFF button**
Press this button to turn off the sound before the preset time.
- 4 TIME SET button**
Keep this button depressed to set the current time.
- 5 HOUR button**
Press this button while holding the TIME SET button depressed to set the hour on the DIGITAL TIMER display. Each time the button is pressed, the digit on the display advances by one. The digit also advances automatically while keeping this button depressed.
- 6 MINUTE button**
Press this button while holding the TIME SET button depressed to set the minute on the DIGITAL TIMER display.
Each time the button is pressed, the digit on the display advances by one. The digit advances automatically by five while keeping this button depressed.
Instantaneously when the digits are changed, the displayed digits indicate 00 seconds.
- 7 ALARM SET button**
While keeping this button depressed, push the HOUR and MINUTE buttons to set the alarm time.
Push this button to check the preset alarm time.
The alarm time will appear on the display.
- 8 REPEAT ALARM/ALARM OFF button**
Lock this button by depressing it to set the alarm time.
The alarm mark (●) appears on the display.
Release the button by depressing it again to cancel the alarm setting.
- 9 HEADPHONES jack (stereo phone jack)**
- 10 MIC (microphone) jack (phone jack)**
Connect a microphone for microphone mixing.
- 11 TUNING control**
Turn the control to tune in the desired station.
- 12 BAND SELECT buttons**
Press to select the desired band.
FM, MW and LW bands are provided.

13 FUNCTION Select buttons

- TAPE button**
Press this button to listen to a taped program.
- CD (compact disc)/AUX (auxiliary) button**
Press to listen to or record compact disc or auxiliary programs connected to the CD/AUX inputs.
- TUNER button**
Press this button to listen to or record broadcast programs.
- PHONO button**
Press to listen to or record record programs connected to the PHONO inputs.

14 VOLUME control

Regulates the overall sound level.

15 MIC LEVEL (microphone level) control

Controls the input level of the microphone.
Slide the control towards MAX to increase microphone level and towards MIN to decrease it.
When not in use for microphone mixing, set this control to the MIN position.

16 BALANCE control

Adjusts the balance of the left and right channel output levels.

17 GRAPHIC EQUALIZER controls

To equalize the listening or recording sound, slide each control upwards to increase the level of the frequency band, and downwards to decrease the level.
100 Hz: Use to boost or cut the bass.
1 kHz: Use to provide more presence of vocals.
10 kHz: This control effects general treble.
Slide downwards to reduce high frequency noise, such as tape hiss.
To record or listen to the sound with the original tone quality, set all the controls at their center positions.

18 SPECTRUM ANALYZER display

This is a 3-division real time spectrum analyzer, and the frequency band is the same as that of the graphic equalizer.

19 DOL (Dynamic Optimum Loudness) button and indicator

Press to obtain powerful bass sound at small output level.
The indicator illuminates to show that this switch is effective for reproduced bass sound.

20 POWER switch

21 STEREO indicator

Lights when an FM stereo program of sufficient signal strength is tuned in.

22 TUNED indicator

Lights when a station is tuned in.

23 Dial scale

Lights when the FH-55W is turned ON during ac operation.

TC-55W Stereo cassette deck

24 ► (play) indicators

- 25 AMS (Automatic Music Sensor)/BLANK SKIP button and indicator (deck A/B)
Press to activate the AMS function or blank skip function. To deactivate, press the button again.

- 26 ■■ (pause) indicator (deck B)
The indicator blinks just after the power is turned on and during record muting.

27 ● (record) indicator (deck B)

28 Tape operation mode select buttons

◀ (rewind)

► (play)

▶▶ (fast forward)

■ (stop)

■■ (pause)

Press to stop the tape momentarily during recording or playback. To disengage pause mode, press it again.

● (record) button (deck B)

Press the ● button together with the ► button to start recording.

○ (record muting) button (deck B)

Press the button to eliminate unwanted material and insert a blank space for approx. four seconds on a tape (for AMS function) during recording and then set the deck in pause mode.

More than four seconds of blank space can be inserted by keeping this button depressed.

29 TAPE COUNTER and RESET button (deck B)

The TAPE COUNTER provides a numerical reference point.

To reset to zero, press the RESET button.

30 TIMER standby switch (deck B)

Normally set to OFF.

To start recording or playback automatically, set to REC or PLAY.

31 EJECT buttons

Press to open the cassette holders.

32 SYNCHRO DUBBING buttons and indicators

Press the appropriate button to select the dubbing speed.
NORMAL: For normal speed dubbing.

As AMS/BLANK SKIP button, ○ (record muting) button and ■■ (pause) button are effective, this position is useful for tape editing.

HIGH: For high speed dubbing.

This position is useful to dub the whole cassette.

33 DOLBY NR switch*

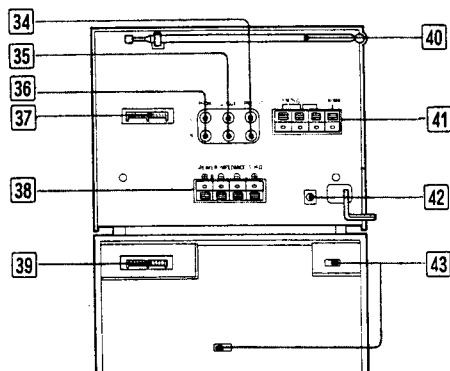
Sets the Dolby NR (Noise Reduction) switch to be used for recording or playback.

OFF: To record or play back without the Dolby NR process.

ON: To record or play back with the Dolby NR process.

* Dolby and the double-D symbol are trade marks of the Dolby Laboratories Licensing Corporation. Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

Rear panel



34 PRE OUT jacks

For recording on to an additional cassette deck the sound adjusted by the GRAPHIC EQUALIZER or the sound mixed with other sources.

35 CD/AUX input jacks

For connecting a CD player, additional tuner, cassette deck, etc.

36 PHONO input jacks

For connecting an optional turntable system

37 Power and signal connector of the receiver

38 Speaker terminals

Connect the supplied speaker system.

39 Power and signal connector of cassette deck

40 Telescopic antenna

Used for FM reception.

41 External antenna terminals

FM 75 Ω, $\frac{1}{4}$ (ground), MW/LW

42 DC IN 15 V (DC input 15 V)

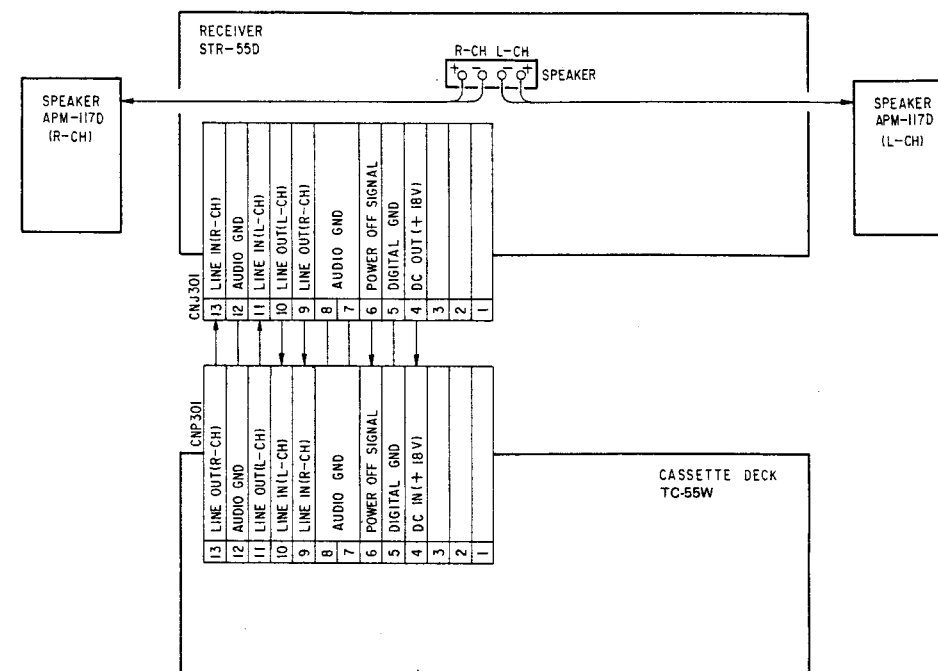
For connecting a car battery cord or the battery case.

43 ISS (Interference Suppress Switch) 1, 2

If interference is encountered when recording MW or LW program, slide the switch to 1 or 3 position depending on which best reduces the noise.

Normally set the switch to 2 position.

CONNECTOR'S SIGNAL ASSIGNMENT

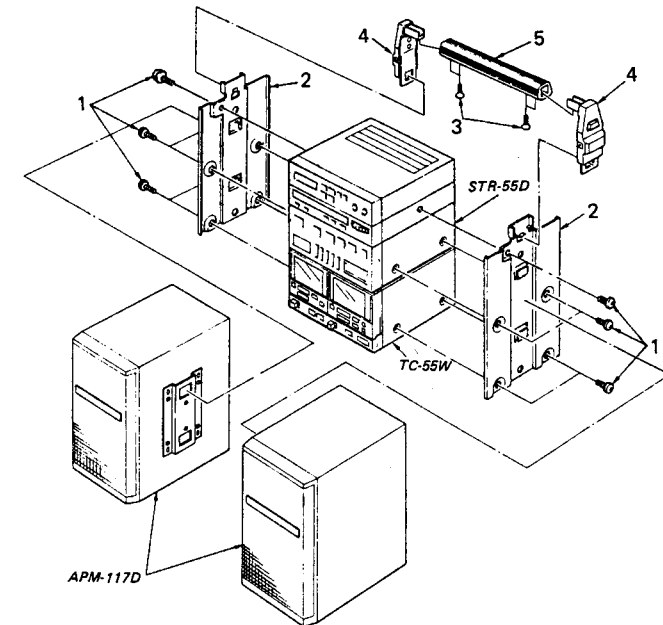


EXPLODED VIEW AND PARTS LIST

NOTE:

The mechanical parts with no reference number in the exploded views are not supplied.

Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.



GENERAL SECTION

No.	Part No.	Description
1	X-4915-501-1	BAG ASSY, STOPPER SCREW
2	4-910-061-11	PLATE (C), SIDE
3	7-685-247-29	SCREW *KTP 3X10 TYPE2 SLIT
4	X-4910-069-1	BRACKET ASSY, HANDLE
5	2-249-402-21	HANDLE

ACCESSORY & PACKING MATERIAL

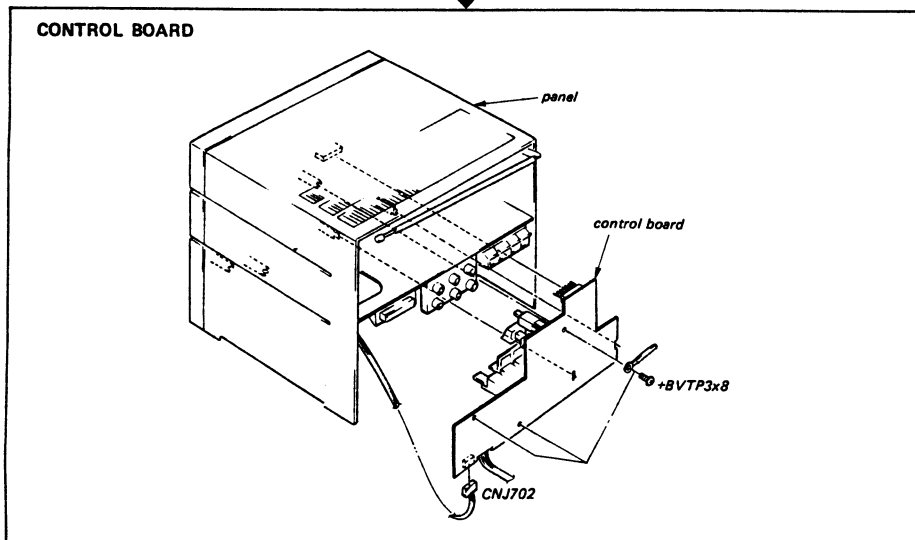
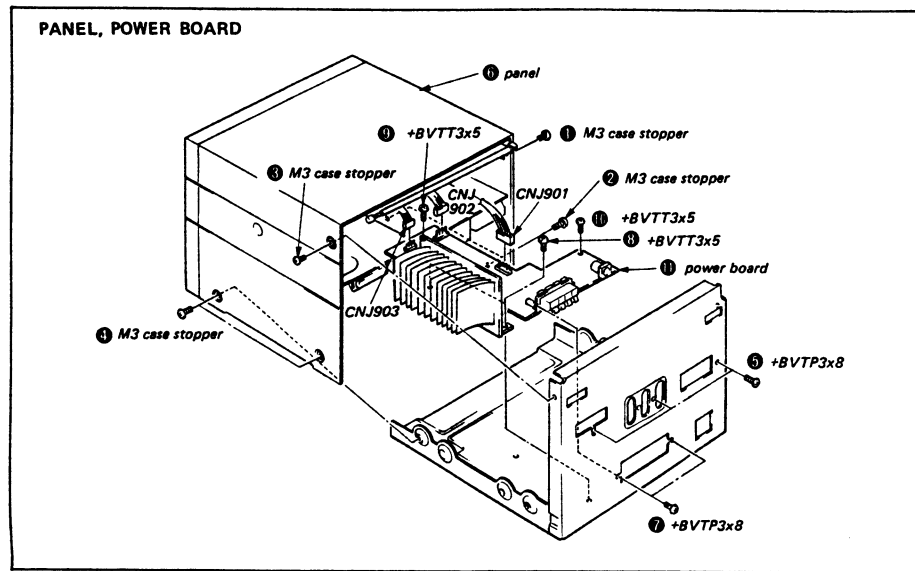
Part No.	Description
*1-558-567-11	CORD (WITH CONNECTOR)
3-701-613-00	BAG, POLYETHYLENE (for CUSHION (F))
3-701-630-00	BAG, POLYETHYLENE (for printed matter, CORD)
*3-764-430-01	(G-AEP)...INSTRUCTION, DBP CAUTION
3-765-101-11	(AEP, UK)...MANUAL, INSTRUCTION
3-765-101-41	(AEP)...MANUAL, INSTRUCTION
3-765-101-51	(G-AEP)...MANUAL, INSTRUCTION
4-915-501-11	INDIVIDUAL CARTON
4-915-503-01	CUSHION, UPPER
4-915-504-01	CUSHION, LOWER
9-911-842-XX	CUSHION (F)
3-536-080-00	(STR-55D)...BAG, POLYETHYLENE
3-881-644-00	(TC-55W)...PROTECTION BAG
4-910-323-01	(APM-117D)...SHEET, PROTECTION
4-910-324-01	(APM-117D)...CUSHION, LOWER
4-910-353-01	(APM-117D)...CUSHION, UPPER

FH-55W
STR-55D

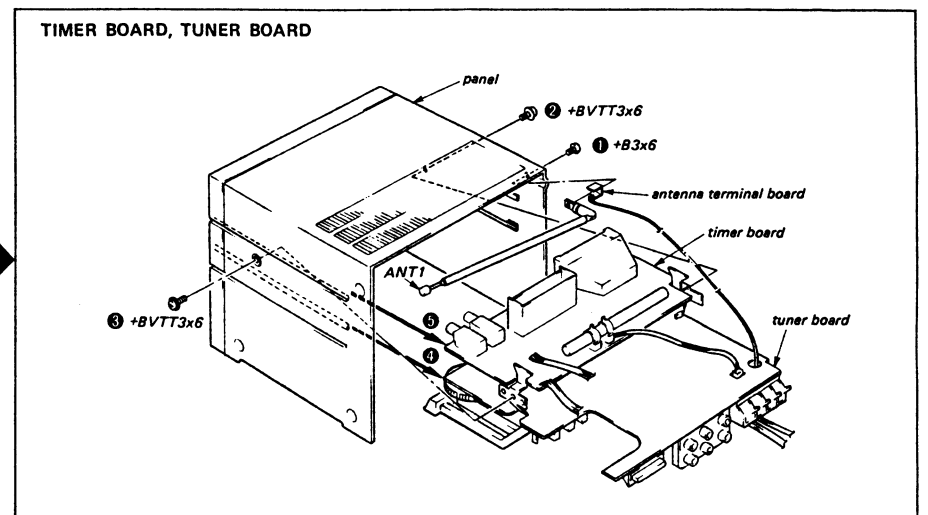
[illegible]

2. DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

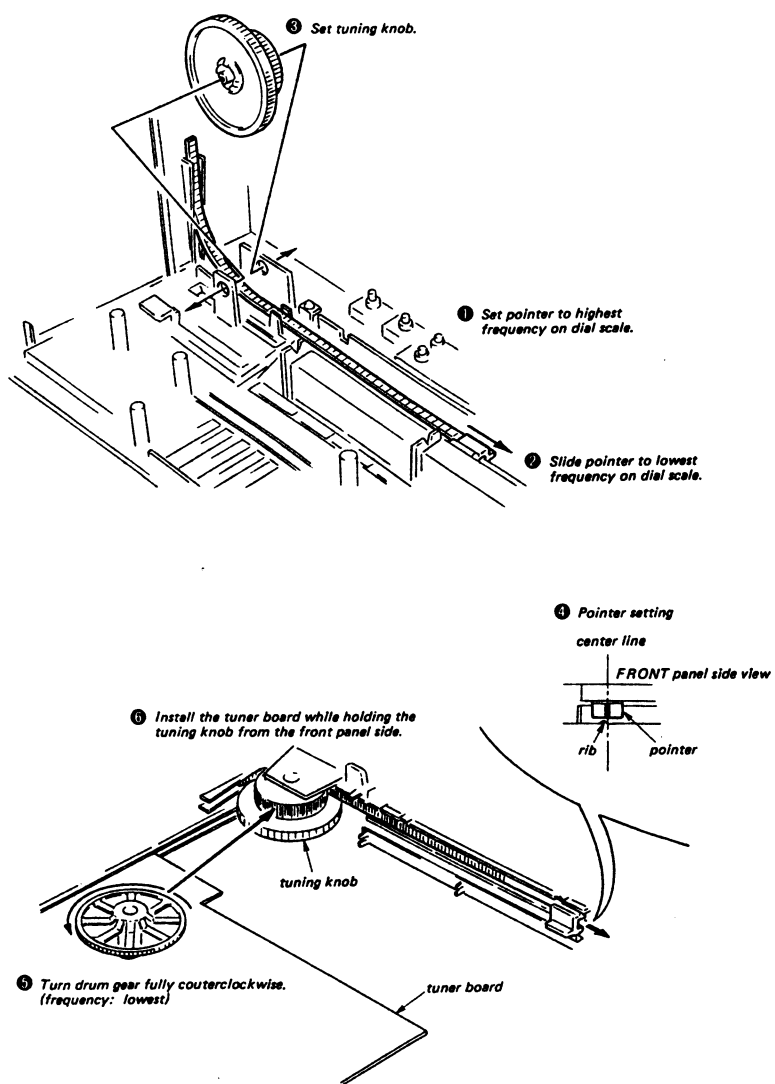


-STR-3-



-STR-4-

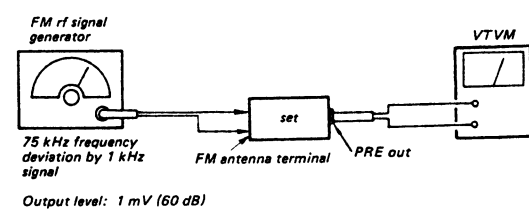
3. DIAL POINTER REINSTALLATION



-STR-5-

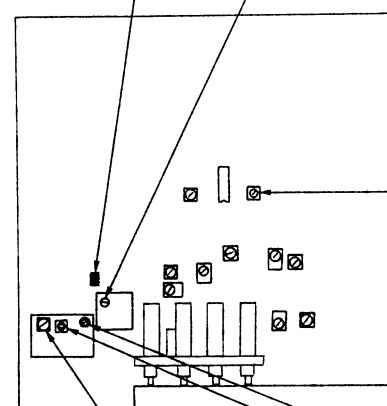
4. ADJUSTMENTS

FM Section



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM	
90 MHz	106 MHz
L001	CT031



IFT001
Adjust for a maximum reading on VTVM.
FM IF ALIGNMENT

FM Discriminator Alignment

Procedure:

FM rf signal generator

distortion meter

set

FM antenna terminal

PRE out

Carrier frequency: 98 MHz
Output level: 1 mV (60 dB)
Modulation: 1 kHz, 75 kHz deviation (100%)
Mode: mono

1. Tune the set to 98MHz.
2. Adjust the core of IFT002 for a minimum reading on the distortion meter.

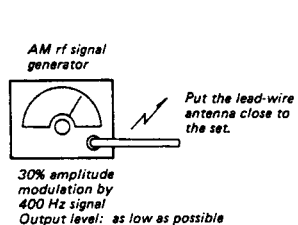
1. Tune the set to 98MHz.
2. Adjust the core of IFT002 for a minimum reading on the distortion meter.

CT002	109.5 MHz
L002	87.1 MHz
Adjust for a maximum reading on VTVM.	
FM FREQUENCY COVERAGE ADJUSTMENT	

-STR-6-

FH-55W STR-55D

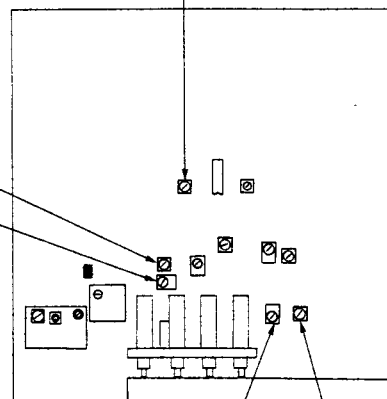
MW Section



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
1,400 kHz	600 kHz
CT051	L051

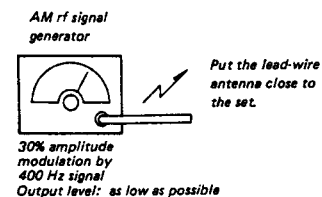
AM IF ALIGNMENT	
Adjust for a maximum reading on VTVM.	
1,000 kHz	
IFT051	



CT052	L052
1,634 kHz	514 kHz
Adjust for a maximum reading on VTVM.	
MW FREQUENCY COVERAGE ADJUSTMENT	

FH-55W STR-55D

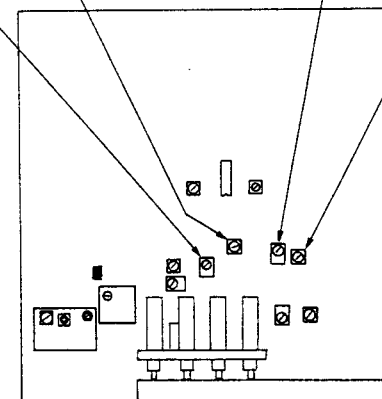
LW Section



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
270kHz	170kHz
CT053	L053

LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
296kHz	136kHz
CT054	L054



FH-55W
STR-55D

FH-55W
STR-55D

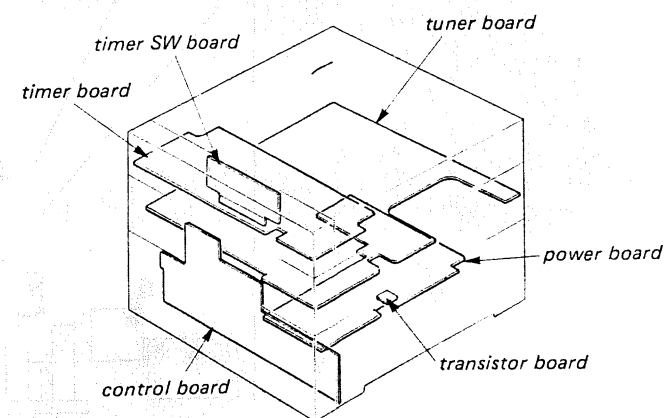
5. MOUNTING DIAGRAM

Note: See page "STR-16" for semiconductor lead layouts.

Semiconductor Location

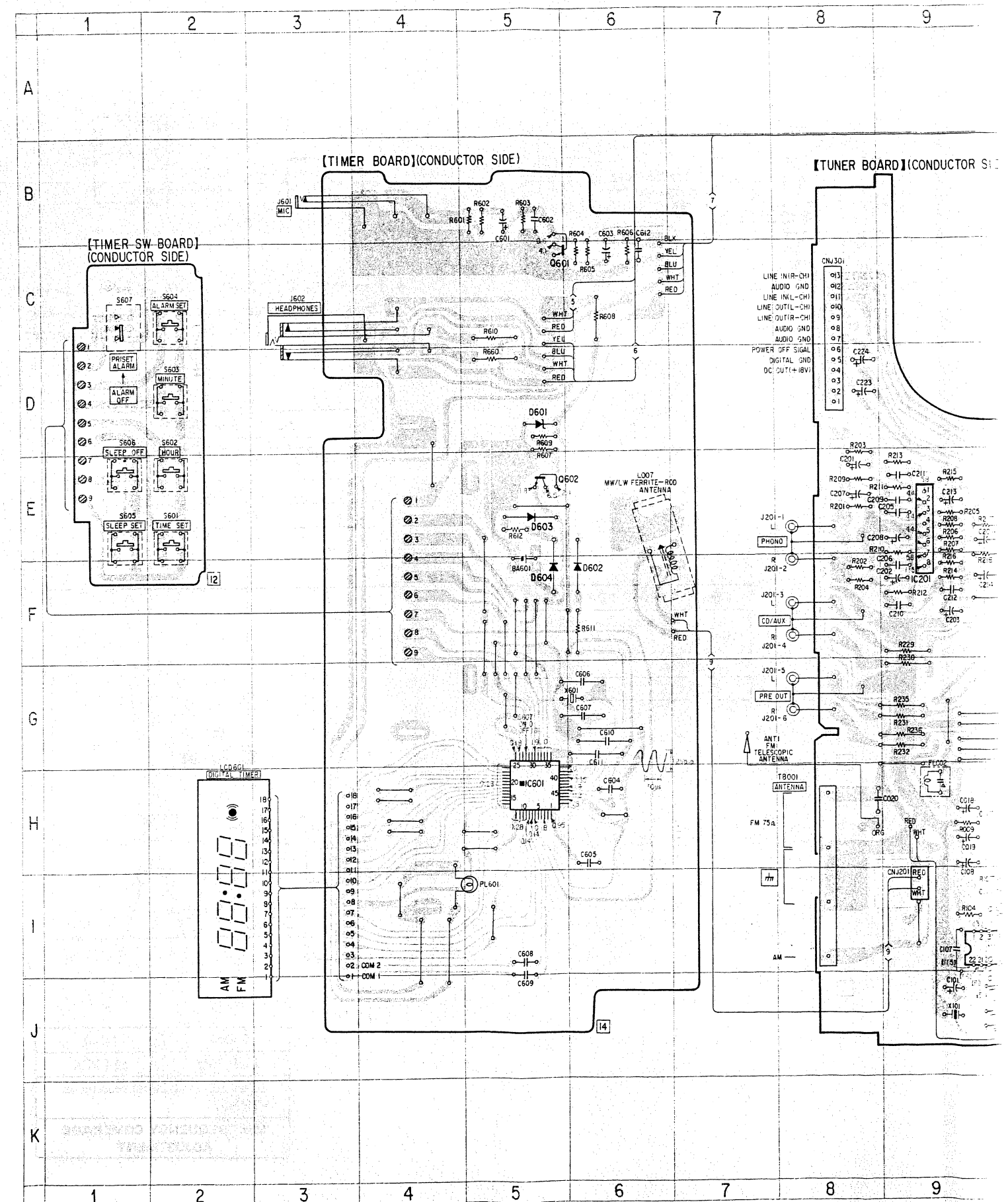
Ref. No.	Location	Ref. No.	Location
D001	C-14	IC001	C-14
D002	G-11	IC002	F-11
D003	I-15	IC101	I-10
D004	F-12	IC201	F-9
D101	J-11	IC202	G-11
D102	J-15	IC601	H-5
D601	D-5	IC701	C-17
D602	F-6	IC702	C-18
D603	E-5	IC703	C-18
D604	F-5	IC801	J-24
D701	B-18		
D702	B-18	Q001	C-15
D703	C-18	Q002	C-16
D704	C-18	Q101	D-16
D705	C-18	Q201	J-14
D706	B-18	Q202	I-12
D707	B-18	Q203	J-14
D708	C-18	Q601	C-5
D709	C-18	Q602	E-5
D710	C-18	Q701	E-19
D711	B-19	Q703	D-18
D712	B-19	Q751	E-19
D713	C-19	Q801	J-20
D714	C-19	Q802	J-21
D715	C-19	Q851	J-20
D716	D-20	Q852	J-21
D801	I-23	Q901	J-22
D802	H-24	Q902	J-22
D803	I-21	Q903	H-22
D901	H-20		
D902	H-22	D904	F-26
D903	I-21		

Circuit Board Layout



Note:

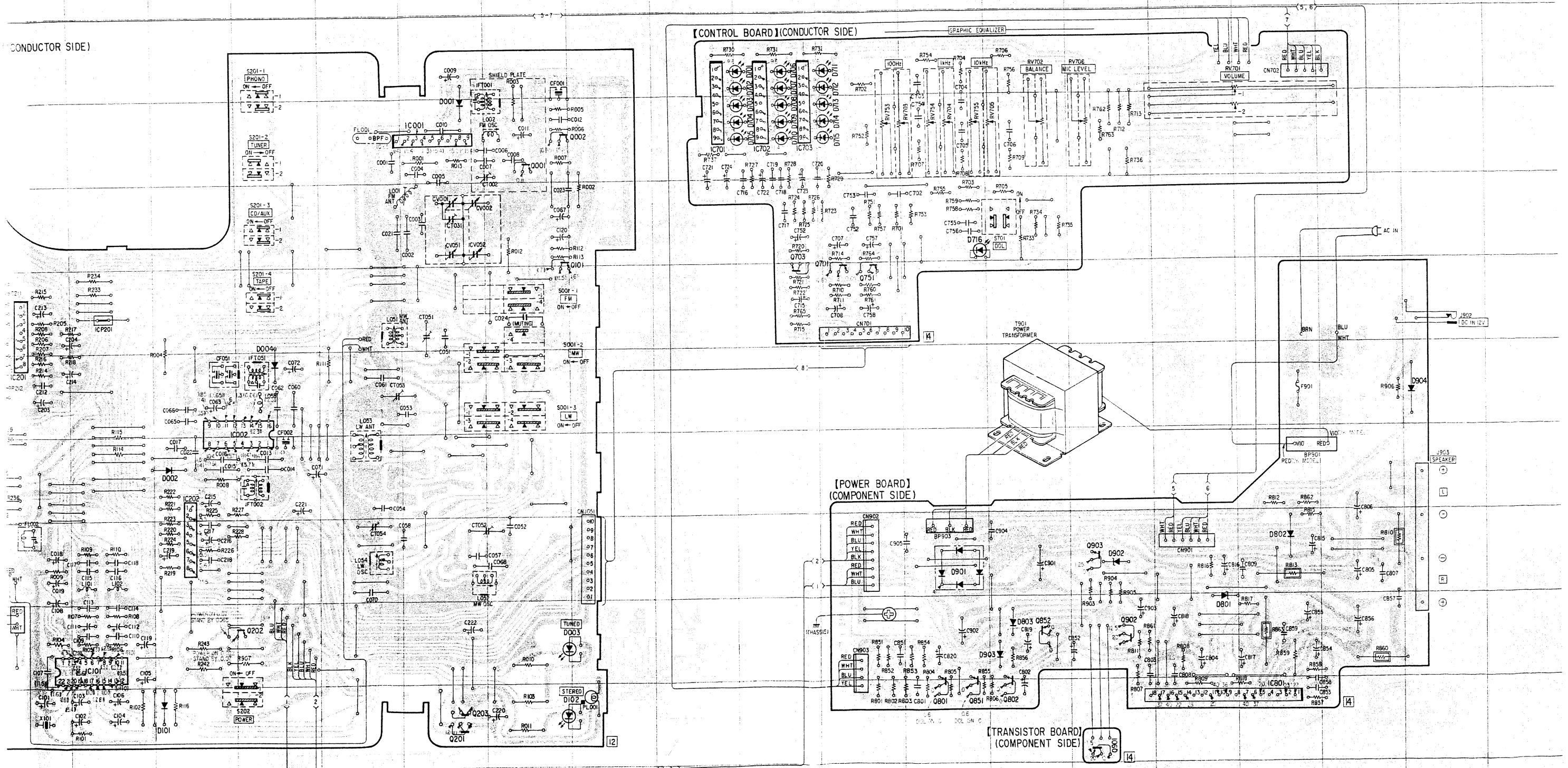
- : parts extracted from the component side.
- : part mounted on the conductor side.
- : indicates side identified with part number.



FH-55W
STR-55D

FH-55W
STR-55D

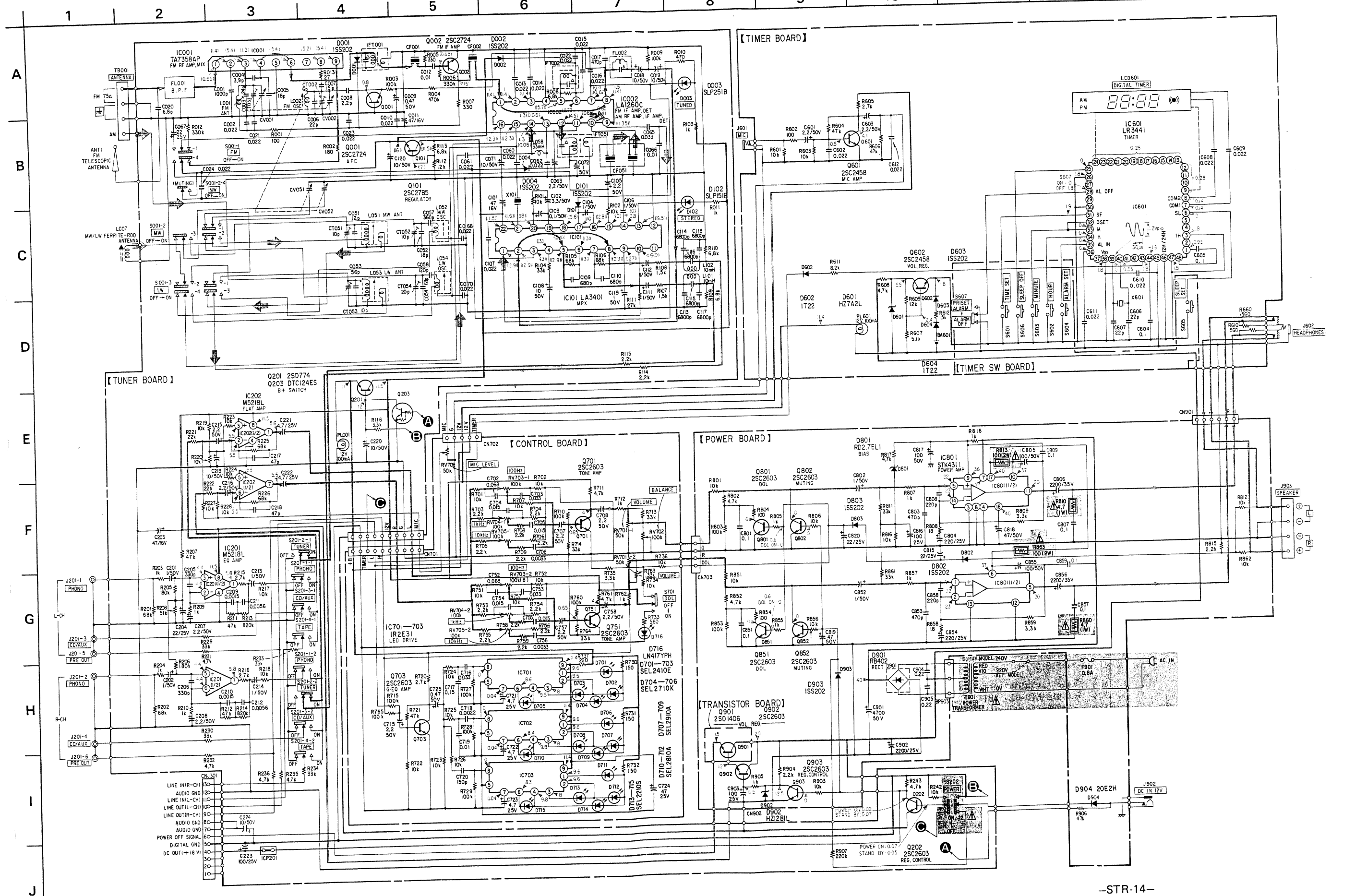
CONDUCTOR SIDE)



FH-55W
STR-55D

FH-55W
STR-55D

6. SCHEMATIC DIAGRAM



15

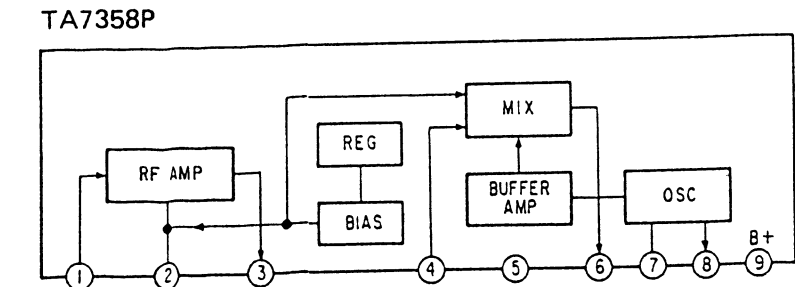
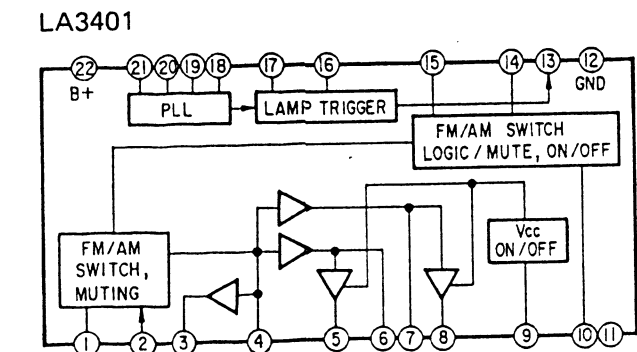
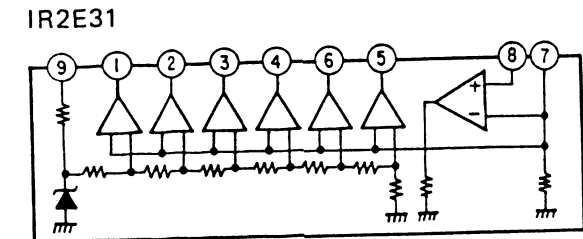
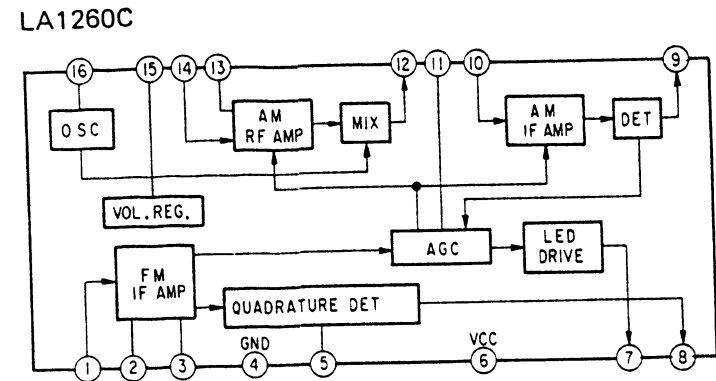
16

17

18

19

IC BLOCK DIAGRAMS



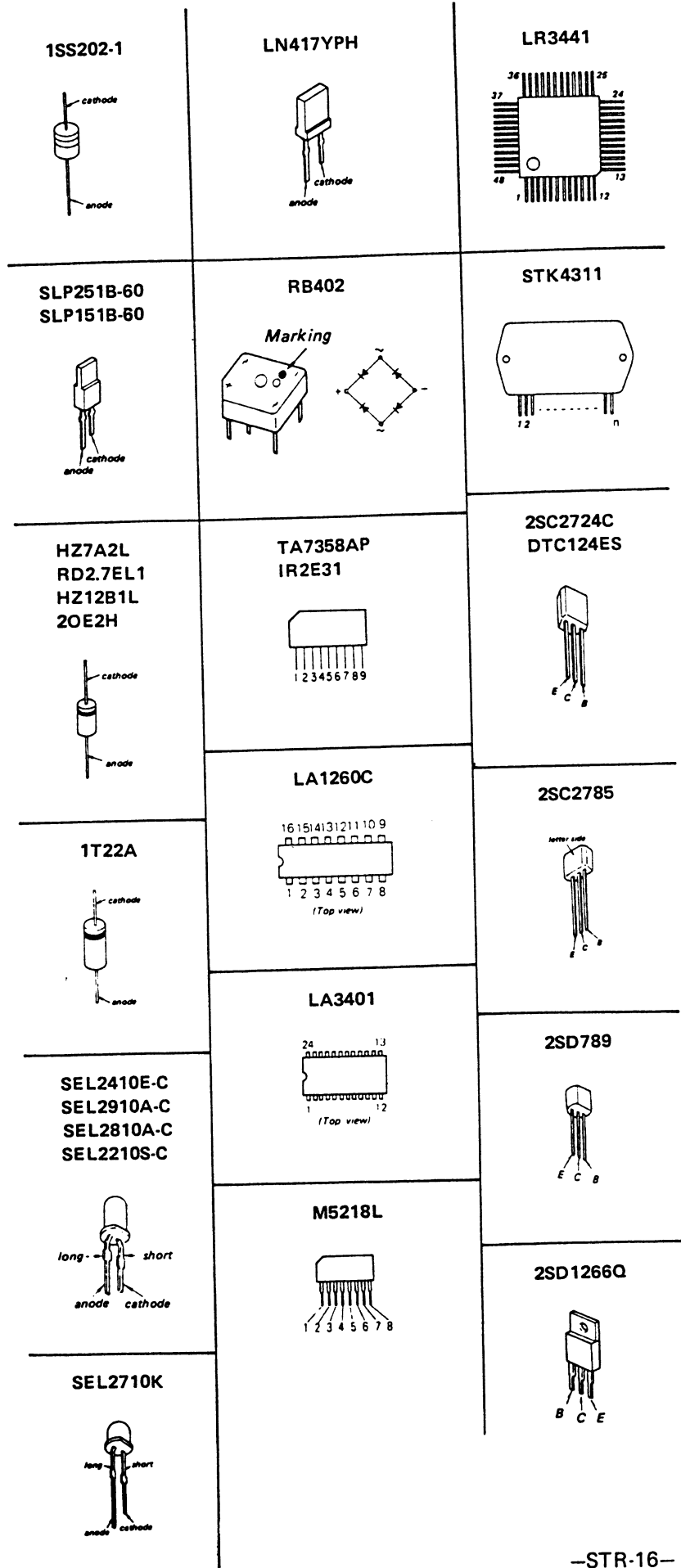
Note:

- All capacitors are in μF unless otherwise noted. pF : $\mu\mu\text{F}$ 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- Δ : internal component.
- : nonflammable resistor.
- Switch with sliding contact indicated by hatched lines shows shorting type.
- : B+ bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM (50 $\text{k}\Omega/\text{V}$).
- no mark: AM
() : FM
() : common (FM/AM)
- Voltage variations may be noted due to normal production tolerances.
- : main signal path (FM)
- : signal path (MW)
- Switch

Ref.No.	Switch	Position
S001	BAND SELECT	FM
S201	FUNCTION	TUNER
S202	POWER	OFF
S601	TIME SET	OFF
S602	HOUR	OFF
S603	MINUTE	OFF
S604	ALARM SET	OFF
S605	SLEEP SET	OFF
S606	SLEEP OFF	OFF
S607	REPEAT ALARM	OFF
S701	DOL	OFF

Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

SEMICONDUCTOR LEAD LAYOUT



FH-55W **STR-55D**

7. EXPLODED VIEWS AND PARTS LIST

NOTE:

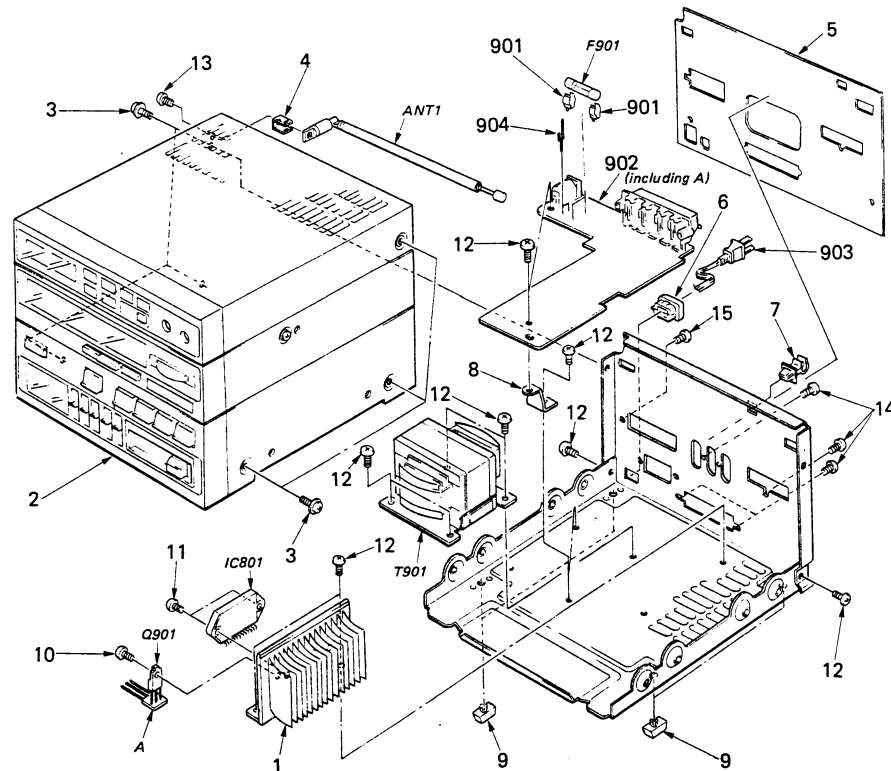
The mechanical parts with no reference number in the exploded views are not supplied.

Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The construction parts of an assembled part are indicated with a collation number in the remark column.

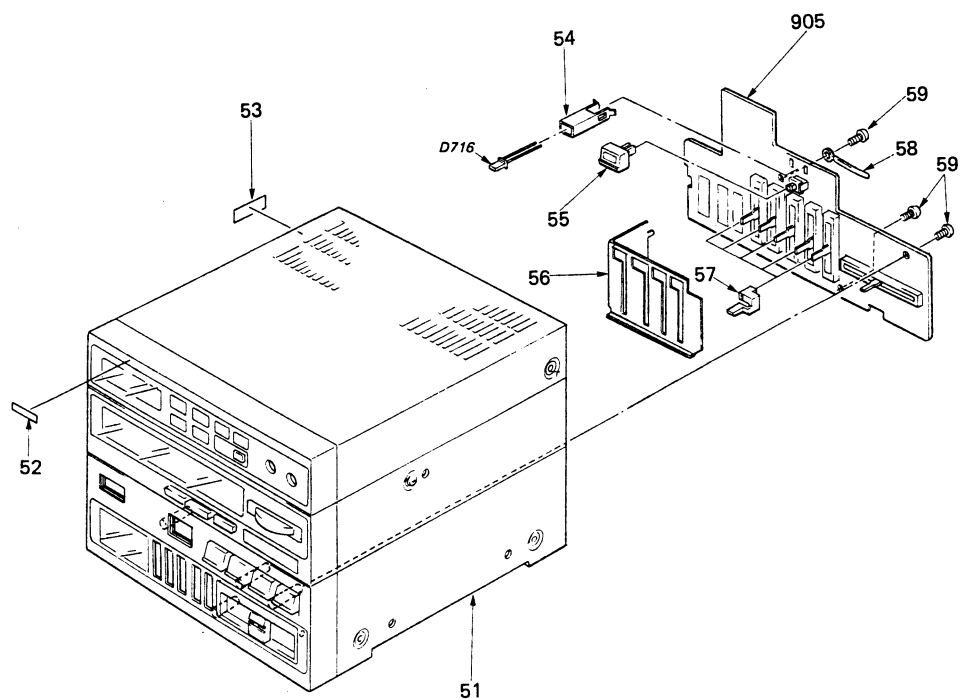
The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

(1)



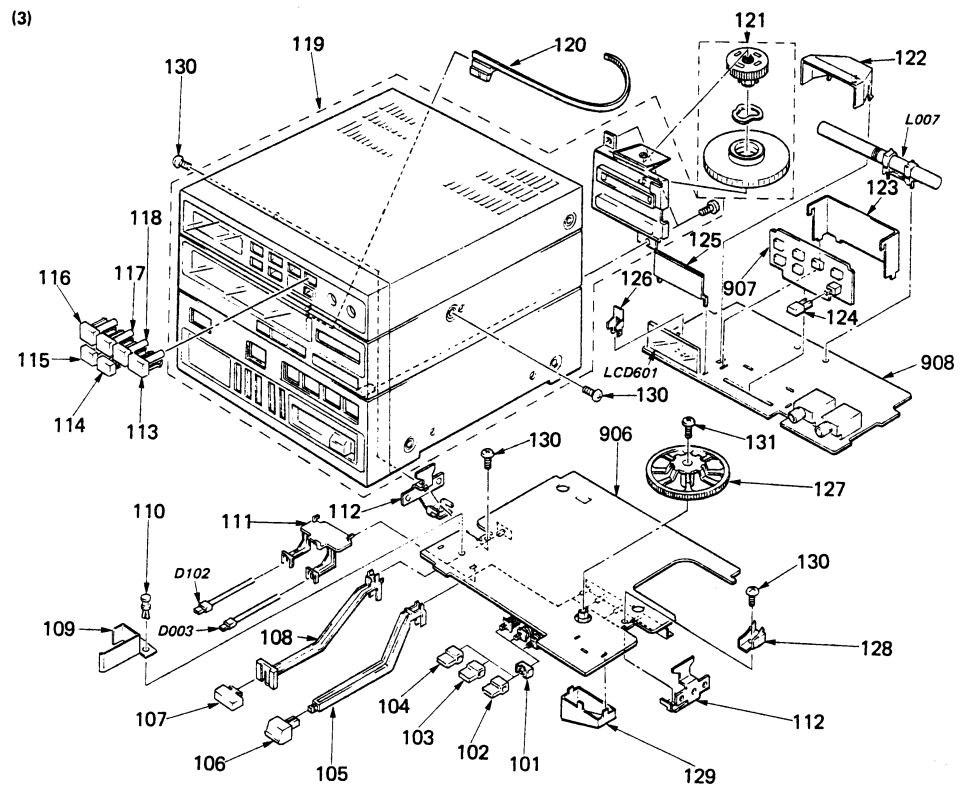
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	*4-915-622-01	HEAT SINK		12	7-682-546-04	SCREW +BVTT 3X5 (S)	
2	X-4915-609-1	PANEL ASSY, FRONT		13	7-682-547-09	SCREW +B 3X6	
3	4-886-821-21	SCREW, M3 CASE STOPPER		14	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	
4	*4-915-613-01	TERMINAL BOARD, ANTENNA		901	A 1-533-162-00	HOLDER, FUSE	
5	4-915-615-11	(AEP)...PLATE, JACK		902	*A-4388-526-A	MOUNTED PCB, POWER	
	4-915-615-31	(UK)...PLATE, JACK		903	A 1-534-817-XX	(AEP)...CORD, POWER, EURO PLUG	
6	3-703-244-00	BUSHING (2104), CORD			A 1-555-001-00	(UK)...CORD, POWER	
7	4-915-611-01	HOLDER, ROD		904	1-535-416-00	TERMINAL	
8	*4-915-607-01	BRACKET, PCB		ANT1	1-501-270-00	ANTENNA, TELESCOPIC (FM)	
9	X-4902-937-1	FOOT ASSY, RUBBER		F901	A 1-532-215-00	FUSE, TIME-LAG	
10	7-685-647-71	SCREW +BVTP 3X10 TYPE2 IT-3		IC801	8-749-943-11	IC STK4311	
11	7-685-650-71	SCREW +BVTP 3X16 TYPE2 IT-3		Q901	8-729-400-81	TRANSISTOR 2SD1266Q	
				T901	A 1-448-519-11	TRANSFORMER, POWER	

(2)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	X-4915-609-1	PAK ASSY, FRONT		57	4-915-319-21	KNOB, GRAPHIC EQUALIZER	
52	X-701-690-00	(UK).....LABEL (MADE IN JAPAN)		58	*3-703-150-11	CLAMP	
53	3-703-079-21	(UK).....LABEL, CAUTION (BACK)		59	7-685-646-71	SCREW +BYP 3X8 TYPE2 N-S	
54	*4-915-626-01	HOLDER, LED		905	*1-618-852-11	PC BOARD, CONTROL	
55	4-915-604-11	KNOB (B), FUNCTION (DOL)		D716	8-719-403-97	DIODE LN417YPH	
56	*4-915-606-01	PLATE (GE), BLIND					

(3)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	4-864-307-00	RING		119	X-4915-609-1	PANEL ASSY, FRONT	
102	4-915-601-01	BUTTON, BAND SELECT (FM)		120	*4-915-640-01	RACK, POINTER	
103	4-915-601-11	BUTTON, BAND SELECT (MW)		121	A-4490-211-A	KNOB ASSY, TUNING	
104	4-915-601-41	BUTTON, BAND SELECT (LW)		122	*4-915-627-01	HOUSE, LAMP	
105	*4-915-621-01	ROD, FUNCTION					
106	4-915-604-01	KNOB (B), FUNCTION		123	*4-915-638-01	RETAINER, PC BOARD	
107	4-910-056-41	KNOB, POWER		124	4-915-610-01	BUTTON, SQUARE	
108	*4-915-620-01	JOINT, POWER		125	4-884-848-00	ILLUMINATOR (ST)	
109	*4-915-645-01	PLATE, LIGHT INTERCEPTION		126	*4-904-507-01	BLIND, LAMP	
				127	4-915-617-01	GEAR, DRUM	
110	4-812-134-11	RIVET, NYLON, 3.5		128	*4-915-644-01	RAIL, GUIDE	
111	*4-915-639-01	HOLDER, LED		129	*4-868-450-00	PLATE (C), SHIELD	
112	*4-915-635-01	HOLDER, PC BOARD		130	7-685-751-09	SCREW #BYTT 3x6 (S)	
113	4-915-614-31	BUTTON (B), TIMER SQUARE (ALARM SET)		131	7-621-773-95	SCREW #B 2.6x6	
114	4-915-614-51	BUTTON (B), TIMER SQUARE (SLEEP OFF)					
115	4-915-614-41	BUTTON (B), TIMER SQUARE (SLEEP SET)		906	*A-4351-506-A	MOUNTED PCB, TUNER	
116	4-915-614-01	BUTTON (B), TIMER SQUARE (TIME SET)		907	*1-618-854-11	PC BOARD, TIMER SW	
117	4-915-614-11	BUTTON (B), TIMER SQUARE (HOUR)		908	*1-618-851-11	PC BOARD, TIMER	
118	4-915-614-21	BUTTON (B), TIMER SQUARE (MINUTE)		0003	8-719-938-10	DIODE SLPS218-60	
				0102	8-719-938-10	DIODE SLPS218-60	
				L007	1-402-214-11	ANTENNA, FERRITE-ROD (LW/MW)	

8. ELECTRICAL PARTS LIST

NOTE:

Items marked * * are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: μ F, PF: μ F.

RESISTORS

All resistors are in ohms.
F : nonflammable

COILS

MMH : mH, UH : μ H

SEMICONDUCTORS

In each case, U : μ , for example:
UA... : μ A..., UPA... : μ PA..., UPC... : μ PC,
UPD... : μ PD...

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	Δ 1-533-162-00	HOLDER, FUSE
902	*A-4388-526-A	MOUNTED PCB, POWER
903	Δ 1-534-817-XX Δ 1-555-001-00	(AEP)....CORD, POWER, EURO PLUG (UK)....CORD, POWER
904	1-535-416-00	TERMINAL
905	*1-618-852-11	PC BOARD, CONTROL
906	*A-4351-506-A	MOUNTED PCB, TUNER
907	*1-618-854-11	PC BOARD, TIMER SW
908	*1-618-851-11	PC BOARD, TIMER
ANT1	1-501-270-00	ANTENNA, TELESCOPIC (FM)
BA601	1-528-188-11	BATTERY, LITHIUM
BP901	*1-535-139-00	BASE POST 22MM (10MM PITCH) 2P
BP903	*1-535-116-00	TERMINAL
C001	1-162-294-31	CERAMIC 0.001MF 10% 50V
C002	1-161-494-00	CERAMIC 0.022MF 30% 25V
C003	1-162-208-31	CERAMIC 24PF 5% 50V
C004	1-162-194-31	CERAMIC 3.9PF 10% 50V
C005	1-162-205-31	CERAMIC 18PF 5% 50V
C006	1-102-892-00	CERAMIC 22PF 5% 50V
C007	1-162-203-31	CERAMIC 15PF 5% 50V
C008	1-162-191-31	CERAMIC 2.2PF 10% 50V
C009	1-123-379-00	ELECT 0.47MF 20% 50V
C010	1-161-494-00	CERAMIC 0.022MF 30% 25V
C011	1-123-332-00	ELECT 47MF 20% 16V
C012	1-162-306-31	CERAMIC 0.01MF 20% 16V
C013	1-161-494-00	CERAMIC 0.022MF 30% 25V
C014	1-161-494-00	CERAMIC 0.022MF 30% 25V
C015	1-161-494-00	CERAMIC 0.022MF 30% 25V
C016	1-161-494-00	CERAMIC 0.022MF 30% 25V
C017	1-162-290-31	CERAMIC 470PF 10% 50V
C018	1-123-356-00	ELECT 10MF 20% 50V
C019	1-123-356-00	ELECT 10MF 20% 50V
C020	1-162-197-31	CERAMIC 6.8PF 10% 50V
C021	1-161-494-00	CERAMIC 0.022MF 30% 25V
C022	1-161-494-00	CERAMIC 0.022MF 30% 25V
C023	1-161-494-00	CERAMIC 0.022MF 30% 25V
C024	1-161-494-00	CERAMIC 0.022MF 30% 25V
C051	1-162-201-31	CERAMIC 12PF 5% 50V
C052	1-102-295-00	CERAMIC 18PF 5% 50V
C053	1-162-217-31	CERAMIC 56PF 5% 50V
C054	1-102-860-00	CERAMIC 68PF 5% 50V
C057	1-104-066-00	POLYSTYRENE 360PF 5% 50V
C058	1-104-055-00	POLYSTYRENE 120PF 5% 50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C060	1-161-494-00	CERAMIC 0.022MF 30% 25V
C061	1-161-494-00	CERAMIC 0.022MF 30% 25V
C062	1-161-494-00	CERAMIC 0.022MF 30% 25V
C063	1-123-381-00	ELECT 2.2MF 20% 50V
C065	1-130-489-00	MYLAR 0.033MF 5% 50V
C066	1-162-306-31	CERAMIC 0.01MF 20% 16V
C067	1-123-330-00	ELECT 22MF 20% 25V
C068	1-161-494-00	CERAMIC 0.022MF 30% 25V
C070	1-161-494-00	CERAMIC 0.022MF 30% 25V
C071	1-123-356-00	ELECT 10MF 20% 50V
C072	1-123-380-00	ELECT 1MF 20% 50V
C101	1-123-332-00	ELECT 47MF 20% 16V
C102	1-123-382-00	ELECT 3.3MF 20% 50V
C103	1-123-607-00	ELECT 0.1MF 20% 50V
C104	1-123-380-00	ELECT 1MF 20% 50V
C105	1-123-381-00	ELECT 2.2MF 20% 50V
C106	1-123-380-00	ELECT 1MF 20% 50V
C107	1-161-494-00	CERAMIC 0.022MF 30% 25V
C108	1-123-356-00	ELECT 10MF 20% 50V
C109	1-162-292-31	CERAMIC 680PF 10% 50V
C110	1-162-292-31	CERAMIC 680PF 10% 50V
C111	1-123-380-00	ELECT 1MF 20% 50V
C112	1-123-380-00	ELECT 1MF 20% 50V
C113	1-162-305-31	CERAMIC 0.0068MF 20% 16V
C114	1-162-305-31	CERAMIC 0.0068MF 20% 16V
C115	1-162-305-31	CERAMIC 0.0068MF 20% 16V
C116	1-162-305-31	CERAMIC 0.0068MF 20% 16V
C117	1-162-305-31	CERAMIC 0.0068MF 20% 16V
C118	1-162-305-31	CERAMIC 0.0068MF 20% 16V
C119	1-123-380-00	ELECT 1MF 20% 50V
C120	1-123-356-00	ELECT 10MF 20% 50V
C201	1-123-380-00	ELECT 1MF 20% 50V
C202	1-123-380-00	ELECT 1MF 20% 50V
C203	1-123-332-00	ELECT 47MF 20% 16V
C204	1-123-330-00	ELECT 22MF 20% 25V
C205	1-162-288-31	CERAMIC 330PF 10% 50V
C206	1-162-288-31	CERAMIC 330PF 10% 50V
C207	1-123-381-00	ELECT 2.2MF 20% 50V
C208	1-123-381-00	ELECT 2.2MF 20% 50V
C209	1-162-301-31	CERAMIC 0.0015MF 20% 16V
C210	1-162-301-31	CERAMIC 0.0015MF 20% 16V
C211	1-102-126-00	CERAMIC 0.0056MF 10% 50V
C212	1-102-126-00	CERAMIC 0.0056MF 10% 50V
C213	1-123-380-00	ELECT 1MF 20% 50V
C214	1-123-380-00	ELECT 1MF 20% 50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C215	1-123-381-00	ELECT 2.2MF 20% 50V
C216	1-123-381-00	ELECT 2.2MF 20% 50V
C217	1-162-215-31	CERAMIC 47PF 5% 50V
C218	1-162-215-31	CERAMIC 47PF 5% 50V
C219	1-123-356-00	ELECT 10MF 20% 50V
C220	1-123-356-00	ELECT 10MF 20% 50V
C221	1-123-369-00	ELECT 4.7MF 20% 25V
C222	1-123-369-00	ELECT 4.7MF 20% 25V
C223	1-123-345-00	ELECT 100MF 20% 25V
C224	1-123-356-00	ELECT 10MF 20% 50V
C601	1-123-381-00	ELECT 2.2MF 20% 50V
C602	1-162-596-00	CERAMIC 0.022MF 25V
C603	1-123-381-00	ELECT 2.2MF 20% 50V
C604	1-136-165-00	FILM 0.1MF 5% 50V
C605	1-136-165-00	FILM 0.1MF 5% 50V
C606	1-161-283-00	CERAMIC 22PF 5% 50V
C607	1-161-283-00	CERAMIC 22PF 5% 50V
C608	1-162-596-00	CERAMIC 0.022MF 25V
C609	1-162-596-00	CERAMIC 0.022MF 25V
C610	1-162-596-00	CERAMIC 0.022MF 25V
C611	1-162-596-00	CERAMIC 0.022MF 25V
C612	1-162-596-00	CERAMIC 0.022MF 25V
C702	1-136-163-00	FILM 0.068MF 5% 50V
C703	1-136-159-00	FILM 0.033MF 5% 50V
C704	1-136-155-00	FILM 0.015MF 5% 50V
C705	1-136-155-00	FILM 0.015MF 5% 50V
C706	1-162-303-31	CERAMIC 0.0033MF 20% 16V
C707	1-123-612-00	ELECT 2.2MF 20% 50V
C708	1-123-612-00	ELECT 2.2MF 20% 50V
C715	1-123-612-00	ELECT 2.2MF 20% 50V
C716	1-136-159-00	FILM 0.033MF 5% 50V
C717	1-136-167-00	FILM 0.15MF 5% 50V
C718	1-162-302-31	CERAMIC 0.0022MF 30% 16V
C719	1-162-306-31	CERAMIC 0.01MF 30% 16V
C720	1-162-284-31	CERAMIC 150PF 10% 50V
C721	1-123-616-00	ELECT 4.7MF 20% 25V
C722	1-123-616-00	ELECT 4.7MF 20% 25V
C723	1-123-616-00	ELECT 4.7MF 20% 25V
C724	1-124-477-11	ELECT 0.47MF 20% 50V
C725	1-123-610-00	ELECT 0.47MF 20% 50V
C752	1-136-163-00	FILM 0.068MF 5% 50V
C753	1-136-159-00	FILM 0.033MF 5% 50V
C754	1-136-155-00	FILM 0.015MF 5% 50V
C755	1-136-155-00	FILM 0.015MF 5% 50V
C756	1-162-303-31	CERAMIC 0.0033MF 20% 16V
C757	1-123-612-00	ELECT 2.2MF 20% 50V
C758	1-123-612-00	ELECT 2.2MF 20% 50V
C801	1-136-165-00	FILM 0.1MF 5% 50V
C802	1-123-380-00	ELECT 1MF 20% 50V
C803	1-162-290-31	CERAMIC 470PF 10% 50V
C804	1-124-120-11	ELECT 220MF 20% 25V
C805	1-124-122-11	ELECT 100MF 20% 50V
C806	1-124-618-11	ELECT 2200MF 20% 35V
C807	1-136-165-00	FILM 0.1MF 5% 50V
C808	1-162-286-31	CERAMIC 220PF 10% 50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C809	1-136-165-00	FILM 0.1MF 5% 50V
C815	1-123-330-00	ELECT 22MF 20% 25V
C816	1-123-345-00	ELECT 100MF 20% 25V
C817	1-124-122-11	ELECT 100MF 20% 50V
C818	1-123-359-00	ELECT 47MF 20% 50V
C819	1-123-359-00	ELECT 47MF 20% 50V
C820	1-123-330-00	ELECT 22MF 20% 25V
C851	1-136-165-00	FILM 0.1MF 5% 50V
C852	1-123-380-00	ELECT 1MF 20% 50V
C853	1-162-290-31	CERAMIC 470PF 10% 50V
C854	1-124-120-11	ELECT 220MF 20% 25V
C855	1-124-122-11	ELECT 100MF 20% 50V
C856	1-124-618-11	ELECT 2200MF 20% 35V
C857	1-136-165-00	FILM 0.1MF 5% 50V
C858	1-162-286-31	CERAMIC 220PF 10% 50V
C859	1-136-165-00	FILM 0.1MF 5% 50V
C901	1-125-364-11	ELECT(BLOCK) 4700MF 20% 50V
C902	1-124-563-11	ELECT 2200MF 20% 25V
C903	1-123-345-00	ELECT 100MF 20% 25V
C904	1-136-169-00	FILM 0.22MF 5% 50V
C905	1-136-169-00	FILM 0.22MF 5% 50V
CF001	1-527-964-00	FILTER, CERAMIC
CF002	1-527-964-00	FILTER, CERAMIC
CF051	1-567-665-11	FILTER, CERAMIC
CN701	*1-560-066-00	PIN, CONNECTOR 10P
CN702	*1-564-114-11	PIN, CONNECTOR 5P
CN901	*1-560-064-00	PIN, CONNECTOR 6P
CN902	*1-560-065-00	PIN, CONNECTOR 8P
CN903	*1-560-603-00	PIN, CONNECTOR 4P
CNJ051	1-563-286-11	CONNECTOR, BOARD TO BOARD 10P
CNJ201	*1-560-071-00	PIN, CONNECTOR
CNJ301	1-562-068-13	SOCKET, CONNECTOR 13P
CT002	1-141-263-11	CAP, TRIMMER
CT051	1-141-179-12	CAP, VAR, TRIMMER
CT052	1-141-179-12	CAP, VAR, TRIMMER
CT053	1-141-179-12	CAP, VAR, TRIMMER
CT054	1-141-171-00	CAP, TRIMMER 20P
CV001	1-151-440-00	CAP, TUNING, POLYETHYLENE, INCLUDING CT301
CV002		
CV051		
CV052		
D001	8-719-107-94	DIODE 1SS202-1
D002	8-719-107-94	DIODE 1SS202-1
D003	8-719-938-10	DIODE SLP2518-60
D004	8-719-107-94	DIODE 1SS202-1
D101	8-719-107-94	DIODE 1SS202-1
D102	8-719-938-10	DIODE SLP2518-60
D601	8-719-910-72	DIODE HZ7A2L
D602	8-719-022-21	DIODE 1T22A
D603	8-719-107-94	DIODE 1SS202-1
D604	8-719-022-21	DIODE 1T22A
D701	8-719-301-43	DIODE SEL2410E-C
D702	8-719-301-43	DIODE SEL2410E-C

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D703	8-719-301-43	DIODE SEL2410E-C
D704	8-719-300-95	DIODE SEL2710K
D705	8-719-300-95	DIODE SEL2710K
D706	8-719-300-95	DIODE SEL2710K
D707	8-719-301-60	DIODE SEL2910A-C
D708	8-719-301-60	DIODE SEL2910A-C
D709	8-719-301-60	DIODE SEL2910A-C
D710	8-719-301-52	DIODE SEL2810A-C
D711	8-719-301-52	DIODE SEL2810A-C
D712	8-719-301-52	DIODE SEL2810A-C
D713	8-719-301-38	DIODE SEL2210S-C
D714	8-719-301-38	DIODE SEL2210S-C
D715	8-719-301-38	DIODE SEL2210S-C
D716	8-719-403-97	DIODE LN417YPH
D801	8-719-101-32	DIODE RD2.7EL1
D802	8-719-107-94	DIODE 1SS202-1
D803	8-719-107-94	DIODE 1SS202-1
D901	8-719-300-57	DIODE RB402
D902	8-719-910-24	DIODE HZ12B1L
D903	8-719-107-94	DIODE 1SS202-1
D904	8-719-200-62	DIODE 20E2H
F901	Δ.1-532-215-00	FUSE, TIME-LAG
FL001	1-235-082-00	FILTER, BAND PASS
FL002	1-235-046-00	ENCAPSULATED COMPONENT (B.E.F)
IC001	8-759-204-03	IC TA7358AP
IC002	8-759-801-37	IC LA1260C
IC101	8-759-801-80	IC LA3401
IC201	8-759-600-02	IC M5218L
IC202	8-759-600-02	IC M5218L
IC601	8-759-925-46	IC LR3441
IC701	8-759-913-80	IC IR2E31
IC702	8-759-913-80	IC IR2E31
IC703	8-759-913-80	IC IR2E31
IC801	8-749-943-11	IC STK4311
ICP201	1-532-841-21	LINK, IC
IFT001	*1-404-363-00	TRANSFORMER, IF
IFT002	1-404-677-11	COIL, DISCRIMINATOR
IFT051	1-404-535-11	COIL (WITH IFT)
J201	1-507-911-31	JACK, PIN 6P
J601	1-563-285-00	JACK (MIC)
J602	1-507-878-00	JACK, LARGE TYPE (HEADPHONES)
J902	1-507-563-21	JACK, DC (DC IN 12V)
J903	1-536-705-00	TERMINAL BOARD (SP)
L001	*1-420-884-00	COIL, AIR CORE (FM ANT)
L002	1-459-412-00	COIL (WITH CORE)(FM OSC)
L007	1-402-214-11	ANTENNA, FERRITE-ROD (LW/MW)
L051	1-402-212-11	COIL (MW ANT)
L052	1-406-065-00	COIL (MW OSC)
L053	1-402-038-00	COIL (LW ANT)
L054	1-405-921-00	COIL, OSCILLATOR (LW OSC)
L058	1-408-930-00	MICRO INDUCTOR 33MMH
L101	1-408-924-00	MICRO INDUCTOR 10MMH
L102	1-408-924-00	MICRO INDUCTOR 10MMH

ELECTRICAL PARTS

Ref.No.	Part No.	Description
LCD601	1-807-513-11	DISPLAY PANEL, LIQUID CRYSTAL
PL001	1-518-511-21	LAMP, PILOT
PL601	1-518-511-21	LAMP, PILOT
Q001	8-729-672-42	TRANSISTOR 2SC2724C
Q002	8-729-672-42	TRANSISTOR 2SC2724C
Q101	8-729-178-54	TRANSISTOR 2SC2785
Q201	8-729-378-91	TRANSISTOR 2SD789
Q202	8-729-178-54	TRANSISTOR 2SC2785
Q203	8-729-900-34	TRANSISTOR DTC124ES
Q601	8-729-178-54	TRANSISTOR 2SC2785
Q602	8-729-178-54	TRANSISTOR 2SC2785
Q701	8-729-178-54	TRANSISTOR 2SC2785
Q703	8-729-178-54	TRANSISTOR 2SC2785
Q751	8-729-178-54	TRANSISTOR 2SC2785
Q801	8-729-178-54	TRANSISTOR 2SC2785
Q802	8-729-178-54	TRANSISTOR 2SC2785
Q851	8-729-178-54	TRANSISTOR 2SC2785
Q852	8-729-178-54	TRANSISTOR 2SC2785
Q901	8-729-400-81	TRANSISTOR 2SD1266Q
Q902	8-729-178-54	TRANSISTOR 2SC2785
Q903	8-729-178-54	TRANSISTOR 2SC2785
R001	1-249-405-11	CARBON 100 5% 1/6W
R002	1-247-813-00	CARBON 180 5% 1/6W
R003	1-249-441-11	CARBON 100K 5% 1/6W
R004	1-247-895-00	CARBON 470K 5% 1/6W
R005	1-247-819-00	CARBON 330 5% 1/6W
R006	1-247-891-00	CARBON 330K 5% 1/6W
R007	1-247-819-00	CARBON 330 5% 1/6W
R008	1-247-851-00	CARBON 6.8K 5% 1/6W
R009	1-249-441-11	CARBON 100K 5% 1/6W
R010	1-247-823-00	CARBON 470 5% 1/6W
R011	1-249-417-11	CARBON 1K 5% 1/6W
R012	1-247-891-00	CARBON 330K 5% 1/6W
R013	1-247-793-00	CARBON 27 5% 1/6W
R101	1-249-429-11	CARBON 10K 5% 1/6W
R102	1-249-429-11	CARBON 10K 5% 1/6W
R103	1-249-417-11	CARBON 1K 5% 1/6W
R104	1-249-435-11	CARBON 33K 5% 1/6W
R105	1-247-875-00	CARBON 68K 5% 1/6W
R106	1-247-875-00	CARBON 68K 5% 1/6W
R107	1-249-419-11	CARBON 1.5K 5% 1/6W
R108	1-249-419-11	CARBON 1.5K 5% 1/6W
R109	1-247-851-00	CARBON 6.8K 5% 1/6W
R110	1-247-851-00	CARBON 6.8K 5% 1/6W
R111	1-249-434-11	CARBON 27K 5% 1/6W
R112	1-247-857-00	CARBON 12K 5% 1/6W
R113	1-247-851-00	CARBON 6.8K 5% 1/6W
R114	1-247-839-00	CARBON 2.2K 5% 1/6W
R115	1-247-839-00	CARBON 2.2K 5% 1/6W
R116	1-249-423-11	CARBON 3.3K 5% 1/6W
R201	1-247-875-00	CARBON 68K 5% 1/6W
R202	1-247-875-00	CARBON 68K 5% 1/6W
R203	1-249-417-11	CARBON 1K 5% 1/6W
R204	1-249-417-11	CARBON 1K 5% 1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R205	1-247-885-00	CARBON 180K 5% 1/6W
R206	1-247-885-00	CARBON 180K 5% 1/6W
R207	1-249-437-11	CARBON 47K 5% 1/6W
R208	1-247-872-00	CARBON 51K 5% 1/6W
R209	1-249-417-11	CARBON 1K 5% 1/6W
R210	1-249-417-11	CARBON 1K 5% 1/6W
R211	1-249-437-11	CARBON 47K 5% 1/6W
R212	1-249-437-11	CARBON 47K 5% 1/6W
R213	1-247-901-00	CARBON 820K 5% 1/6W
R214	1-247-901-00	CARBON 820K 5% 1/6W
R215	1-249-422-11	CARBON 2.7K 5% 1/6W
R216	1-249-422-11	CARBON 2.7K 5% 1/6W
R217	1-249-429-11	CARBON 10K 5% 1/6W
R218	1-249-429-11	CARBON 10K 5% 1/6W
R219	1-249-429-11	CARBON 10K 5% 1/6W
R220	1-249-429-11	CARBON 10K 5% 1/6W
R221	1-249-433-11	CARBON 22K 5% 1/6W
R222	1-249-433-11	CARBON 22K 5% 1/6W
R223	1-249-429-11	CARBON 10K 5% 1/6W
R224	1-249-429-11	CARBON 10K 5% 1/6W
R225	1-247-875-00	CARBON 68K 5% 1/6W
R226	1-247-875-00	CARBON 68K 5% 1/6W
R227	1-249-429-11	CARBON 10K 5% 1/6W
R228	1-249-429-11	CARBON 10K 5% 1/6W
R229	1-249-435-11	CARBON 33K 5% 1/6W
R230	1-249-435-11	CARBON 33K 5% 1/6W
R231	1-249-425-11	CARBON 4.7K 5% 1/6W
R232	1-249-425-11	CARBON 4.7K 5% 1/6W
R233	1-249-435-11	CARBON 33K 5% 1/6W
R234	1-249-435-11	CARBON 33K 5% 1/6W
R235	1-249-425-11	CARBON 4.7K 5% 1/6W
R236	1-249-425-11	CARBON 4.7K 5% 1/6W
R242	1-249-429-11	CARBON 10K 5% 1/6W
R243	1-249-425-11	CARBON 4.7K 5% 1/6W
R601	1-249-429-11	CARBON 10K 5% 1/6W
R602	1-249-405-11	CARBON 100 5% 1/6W
R603	1-249-429-11	CARBON 10K 5% 1/6W
R604	1-249-437-11	CARBON 47K 5% 1/6W
R605	1-249-422-11	CARBON 2.7K 5% 1/6W
R606	1-249-437-11	CARBON 47K 5% 1/6W
R607	1-247-848-00	CARBON 5.1K 5% 1/6W
R608	1-249-425-11	CARBON 4.7K 5% 1/6W
R609	1-247-857-00	CARBON 12K 5% 1/6W
R610	1-247-710-11	CARBON 560 5% 1/4W
R611	1-247-853-00	CARBON 8.2K 5% 1/6W
R612	1-249-419-11	CARBON 1.5K 5% 1/6W
R660	1-247-710-11	CARBON 560 5% 1/4W
R701	1-249-429-11	CARBON 10K 5% 1/6W
R702	1-249-429-11	CARBON 10K 5% 1/6W
R703	1-247-839-00	CARBON 2.2K 5% 1/6W
R704	1-247-839-00	CARBON 2.2K 5% 1/6W
R705	1-247-839-00	CARBON 2.2K 5% 1/6W
R706	1-247-839-00	CARBON 2.2K 5% 1/6W
R707	1-249-429-11	CARBON 10K 5% 1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R708	1-247-839-00	CARBON 2.2K 5% 1/6W
R709	1-247-839-00	CARBON 2.2K 5% 1/6W
R710	1-249-441-11	CARBON 100K 5% 1/6W
R711	1-249-425-11	CARBON 4.7K 5% 1/6W
R712	1-249-417-11	CARBON 1K 5% 1/6W
R713	1-249-435-11	CARBON 33K 5% 1/6W
R714	1-249-435-11	CARBON 33K 5% 1/6W
R715	1-249-441-11	CARBON 100K 5% 1/6W
R720	1-249-422-11	CARBON 2.7K 5% 1/6W
R721	1-249-437-11	CARBON 47K 5% 1/6W
R722	1-249-429-11	CARBON 10K 5% 1/6W
R723	1-249-429-11	CARBON 10K 5% 1/6W
R724	1-249-429-11	CARBON 10K 5% 1/6W
R725	1-249-429-11	CARBON 10K 5% 1/6W
R726	1-249-429-11	CARBON 10K 5% 1/6W
R727	1-249-441-11	CARBON 100K 5% 1/6W
R728	1-249-441-11	CARBON 100K 5% 1/6W
R729	1-249-441-11	CARBON 100K 5% 1/6W
R730	1-247-702-11	CARBON 150 5% 1/4W
R731	1-247-702-11	CARBON 150 5% 1/4W
R732	1-247-702-11	CARBON 150 5% 1/4W
R733	1-247-710-11	CARBON 560 5% 1/4W
R734	1-249-429-11	CARBON 10K 5% 1/6W
R735	1-249-423-11	CARBON 3.3K 5% 1/6W
R736	1-249-429-11	CARBON 10K 5% 1/6W
R737	1-247-815-00	CARBON 220 5% 1/6W
R751	1-249-429-11	CARBON 10K 5% 1/6W
R752	1-249-429-11	CARBON 10K 5% 1/6W
R753	1-247-839-00	CARBON 2.2K 5% 1/6W
R754	1-247-839-00	CARBON 2.2K 5% 1/6W
R755	1-247-839-00	CARBON 2.2K 5% 1/6W
R756	1-247-839-00	CARBON 2.2K 5% 1/6W
R757	1-249-429-11	CARBON 10K 5% 1/6W
R758	1-247-839-00	CARBON 2.2K 5% 1/6W
R759	1-247-839-00	CARBON 2.2K 5% 1/6W
R760	1-249-441-11	CARBON 100K 5% 1/6W
R761	1-249-425-11	CARBON 4.7K 5% 1/6W
R762	1-249-417-11	CARBON 1K 5% 1/6W
R763	1-249-435-11	CARBON 33K 5% 1/6W
R764	1-249-435-11	CARBON 33K 5% 1/6W
R765	1-249-441-11	CARBON 100K 5% 1/6W
R801	1-249-429-11	CARBON 10K 5% 1/6W
R802	1-249-425-11	CARBON 4.7K 5% 1/6W
R803	1-249-441-11	CARBON 100K 5% 1/6W
R804	1-249-405-11	CARBON 100 5% 1/6W
R805	1-249-417-11	CARBON 1K 5% 1/6W
R806	1-249-429-11	CARBON 10K 5% 1/6W
R807	1-249-417-11	CARBON 1K 5% 1/6W
R808	1-247-789-00	CARBON 18 5% 1/6W
R809	1-249-423-11	CARBON 3.3K 5% 1/6W
R810	Δ.1-212-368-11	METAL OXIDE 4.7 5% 1W F
R811	1-249-435-11	CARBON 33K 5% 1/6W
R812	1-249-429-11	CARBON 10K 5% 1/6W
R813	Δ.1-206-640-00	METAL OXIDE 100 5% 2W F

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R815	1-247-839-00	CARBON	2.2K	5%	1/6W	
R816	1-249-429-11	CARBON	10K	5%	1/6W	
R817	1-249-425-11	CARBON	4.7K	5%	1/6W	
R818	1-249-417-11	CARBON	1K	5%	1/6W	
R851	1-249-429-11	CARBON	10K	5%	1/6W	
R852	1-249-425-11	CARBON	4.7K	5%	1/6W	
R853	1-249-441-11	CARBON	100K	5%	1/6W	
R854	1-249-405-11	CARBON	100	5%	1/6W	
R855	1-249-417-11	CARBON	1K	5%	1/6W	
R856	1-249-429-11	CARBON	10K	5%	1/6W	
R857	1-249-417-11	CARBON	1K	5%	1/6W	
R858	1-247-789-00	CARBON	18	5%	1/6W	
R859	1-249-423-11	CARBON	3.3K	5%	1/6W	
R860	△ 1-212-368-11	METAL OXIDE	4.7	5%	1W	F
R861	1-249-435-11	CARBON	33K	5%	1/6W	
R862	1-249-429-11	CARBON	10K	5%	1/6W	
R863	△ 1-206-640-00	METAL OXIDE	100	5%	2W	F
R903	1-249-429-11	CARBON	10K	5%	1/6W	
R904	1-247-839-00	CARBON	2.2K	5%	1/6W	
R905	1-249-417-11	CARBON	1K	5%	1/6W	
R906	1-249-437-11	CARBON	47K	5%	1/6W	
R907	1-247-887-00	CARBON	220K	5%	1/6W	
RV701	1-230-793-11	RES, VAR, SLIDE	50K/50K	(VOLUME)		
RV702	1-230-360-11	RES, VAR, SLIDE	100K	(BALANCE)		
RV703	1-237-226-11	RES, VAR, SLIDE	100K/100K	(100Hz)		
RV704	1-237-226-11	RES, VAR, SLIDE	100K/100K	(1kHz)		
RV705	1-237-226-11	RES, VAR, SLIDE	100K/100K	(10kHz)		
RV706	1-230-361-11	RES, VAR, SLIDE	50K	(MIC LEVEL)		
S001	1-570-649-11	SWITCH, PUSH (3 KEY)	(BAND SELECT)			
S201	1-570-647-11	SWITCH, PUSH (4 KEY)	(FUNCTION)			
S202	△ 1-570-650-11	SWITCH, PUSH (1 KEY)	(POWER)			
S601	1-554-303-21	SWITCH, KEY BOARD	(TIME SET)			
S602	1-554-303-21	SWITCH, KEY BOARD	(HOUR)			
S603	1-554-303-21	SWITCH, KEY BOARD	(MINUTE)			
S604	1-554-303-21	SWITCH, KEY BOARD	(ALARM SET)			
S605	1-554-303-21	SWITCH, KEY BOARD	(SLEEP SET)			
S606	1-554-303-21	SWITCH, KEY BOARD	(SLEEP OFF)			
S607	1-554-419-00	SWITCH, PUSH (1 KEY)	(REPEAT/ARARM)			
S701	1-554-444-00	SWITCH, PUSH (1 KEY)	(DOL)			
T901	△ 1-448-519-11	TRANSFORMER, POWER				
TB001	1-536-708-00	TERMINAL BOARD, PUSH 4P	(ANTENNA)			
X101	1-567-250-11	OSCILLATOR, CERAMIC				
X601	1-567-098-00	VIBRATOR, CRYSTAL				

STEREO CASSETTE DECK
(TC-55W/50WX)

Tape Transport Mechanism Type	TCM-CMAY A-1 (DECK A)
	TCM-CMAY B-7 (DECK B)

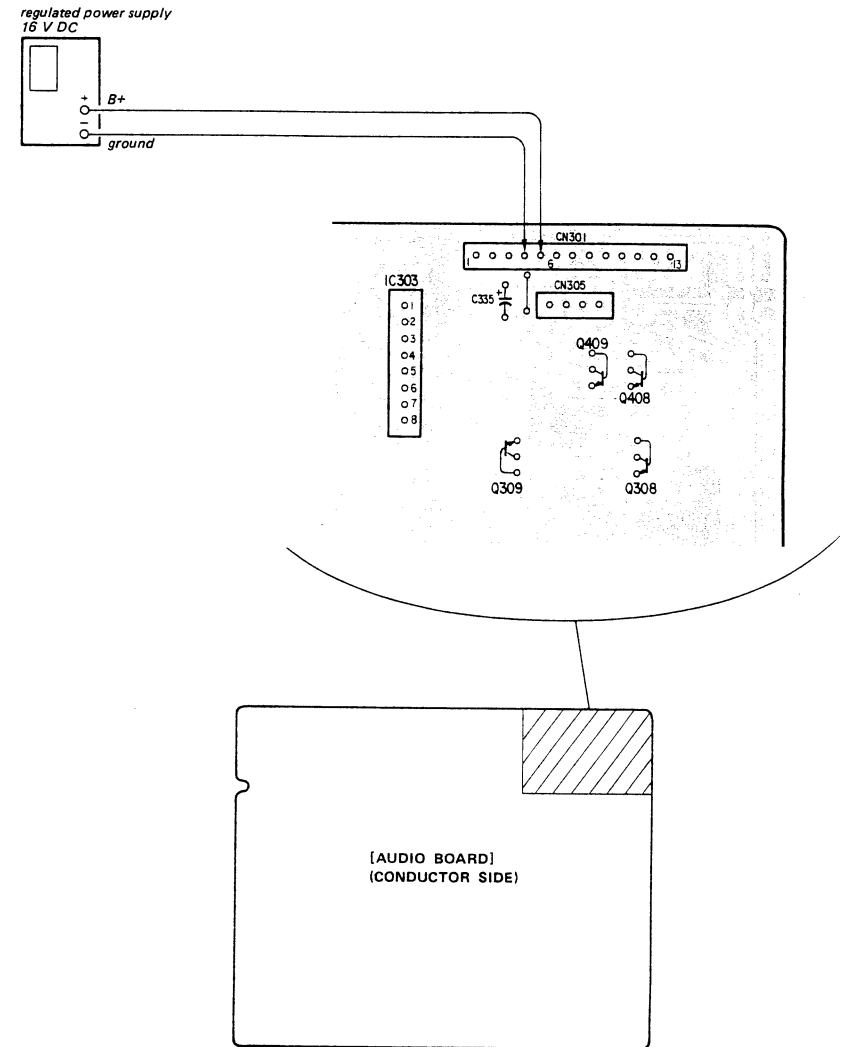
The components identified
by shading and mark △ are
critical for safety.
Replace only with part
number specified.

REPAIRING PRECAUTION

[To apply B+ voltage]

The power of this unit is fed from amplifier.

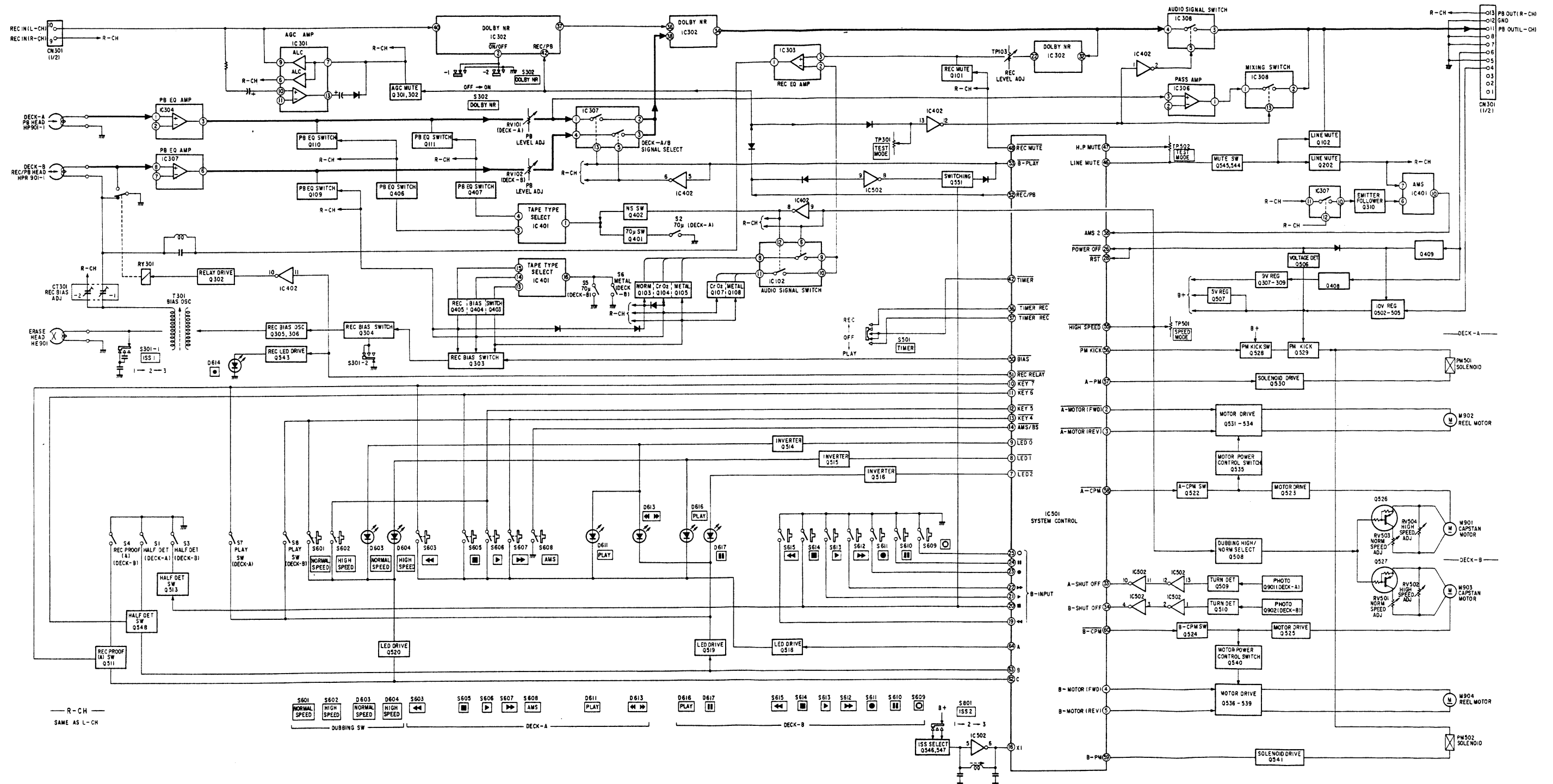
Because of this, connect the regulated power supply as illustrated below when this unit alone operates.



SECTION 1 BLOCK DIAGRAM

FH-55W/50WX
TC-55W/50WX

FH-55W/50WX
TC-55W/50WX



SECTION 2 DISASSEMBLY

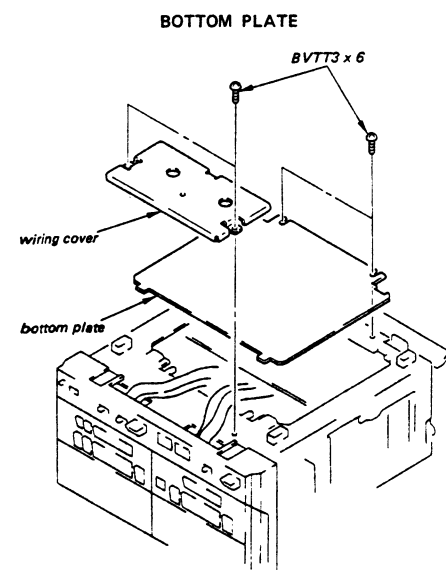
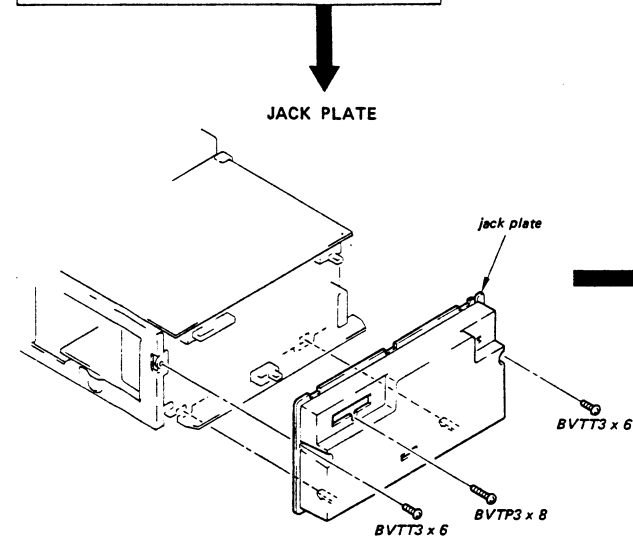
FH-55W/50WX
TC-55W/50WX

FH-55W/50WX
TC-55W/50WX

FH-55W/50WX
TC-55W/50WX

Note: Follow the disassembly procedure in the numerical order given.

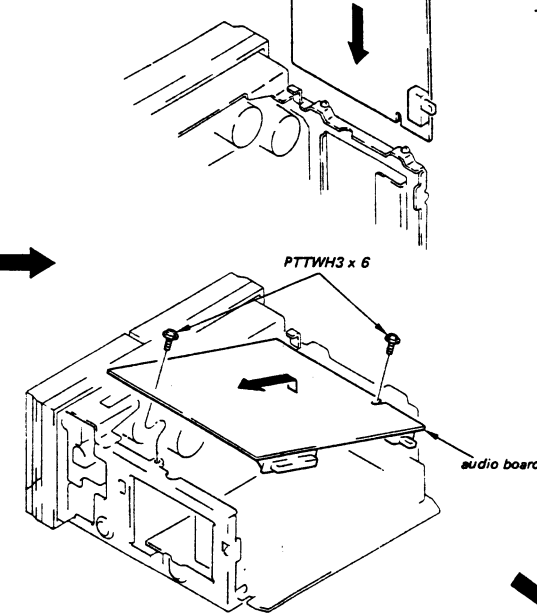
CASE REMOVAL
Remove case by taking out four screws securing case.



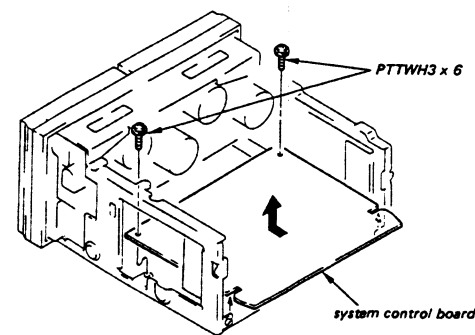
- TC-5 -

AUDIO BOARD

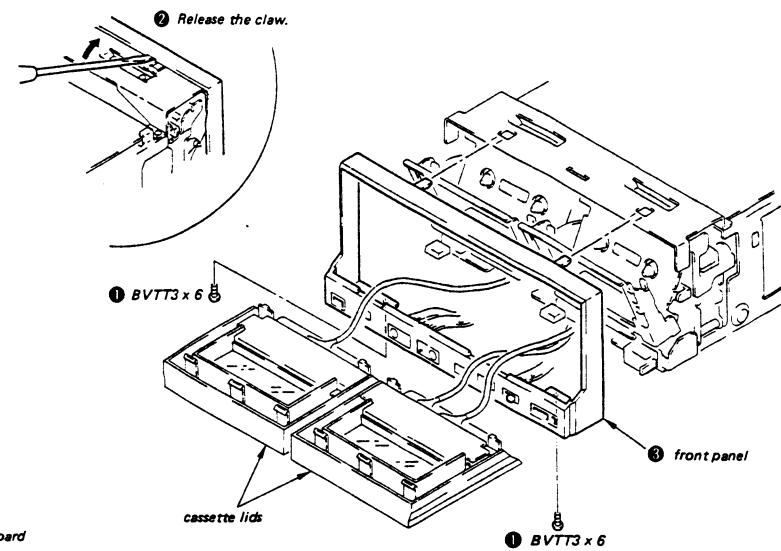
Note on repairing:
Raise up PC board as
illustrated for easy
repairing.



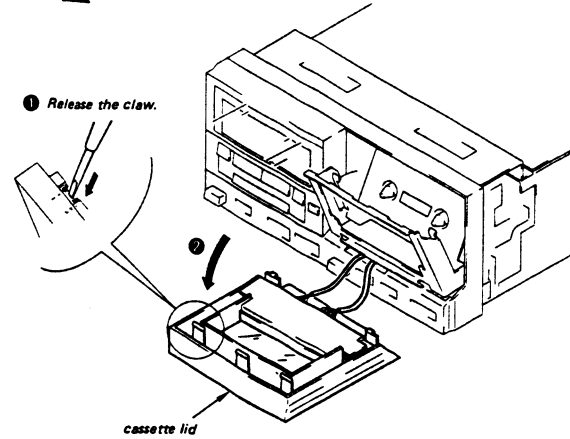
SYSTEM CONTROL BOARD



FRONT PANEL

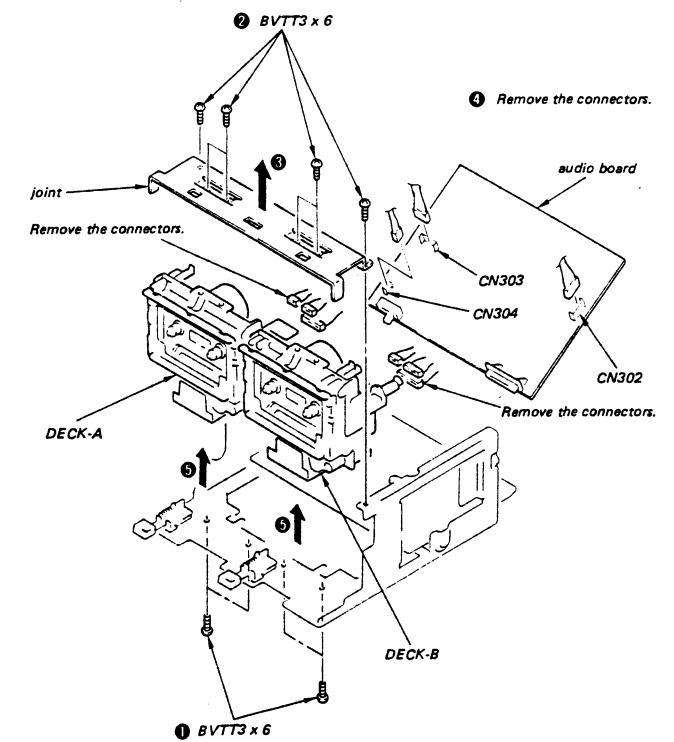


CASSETTE LID

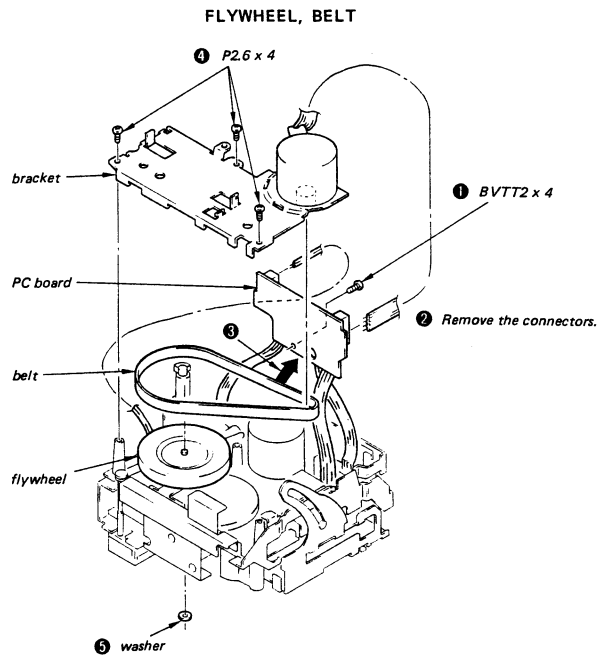


- TC-6 -

DECK-A, B

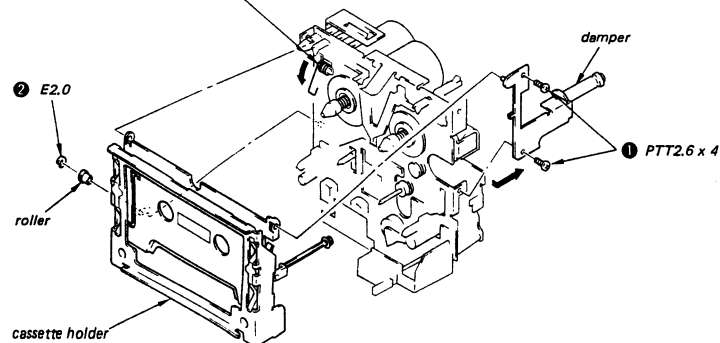


- TC-7 -



CASSETTE HOLDER

Note: When installing, set the spring in the position of arrow.



SECTION 3
ADJUSTMENTS

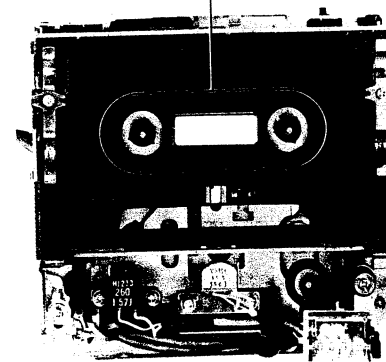
3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
record/playback/erase head rubber belts
capstan
pinch roller
2. Demagnetize the head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	30 - 70 g·cm (0.42 - 0.97 oz·inch)
Fast Forward and Rewind	CQ-201B	90 - 160 g·cm (1.25 - 2.22 oz·inch)
Forward BT	CQ102RB	2 - 6 g·cm (0.03 - 0.08 oz·inch)

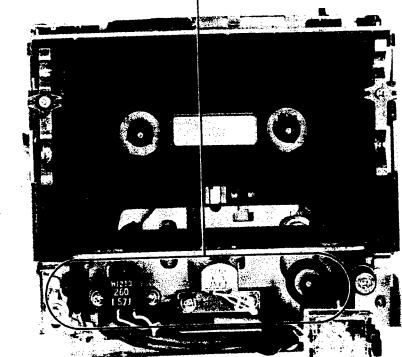
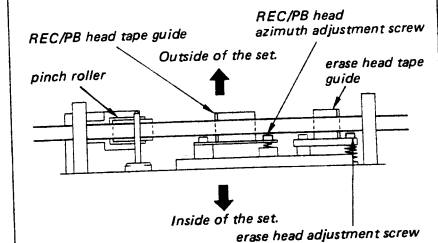


Tape Path Adjustment

Procedure:

1. Insert the mirror cassette (CQ-009 or CQ-012C).
2. Mode: FWD
Adjust FWD tape guide nuts and adjustment shims for no tape curl.
3. After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location:



3-2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual.
The adjustments should be performed for both L-CH and R-CH.

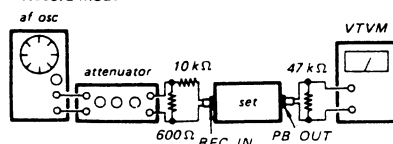
- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch: OFF
TIMER switch: OFF
ISS switch: 2

Standard Record:

Deliver the standard input signal level to the input jack and control the attenuator to obtain the standard output signal level.

Record Mode



Standard Input Level

	REC IN
source impedance	10 kΩ
input level	0.25 V (-10 dB)

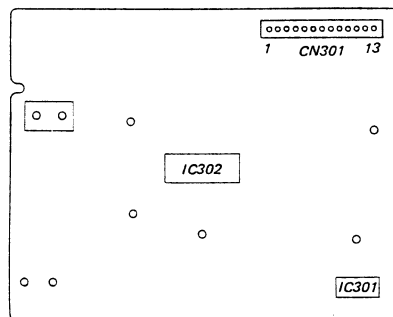
Standard Output Level

	PB OUT
load impedance	47 kΩ
output level	0.44 V (-5 dB)

Locations of REC IN and PB OUT

	CN301 terminal No.		
	L-CH	R-CH	GND
REC IN	10	9	12
PB OUT	11	13	12

[AUDIO BOARD] — Conductor Side —

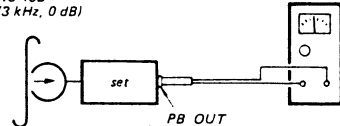


Tape Speed Adjustment

Procedure:

See the left for locations of REC IN and PB OUT.
Mode: forward-playback

test tape WS-48B (13 kHz, 0 dB)
speed checker LFM-30 or digital frequency counter



- Put TP501 into TEST MODE. Adjust high speed pushing the dubbing (High) button from FWD MODE.

Specification: high speed

Speed checker	Digital frequency counter
-0.66 to +0.66%	6000 ±40 Hz

Frequency difference between DECK-A and DECK-B at the beginning of the tape should be within 1.5% (90 Hz).

Adjustment Location:

DECK-A side RV504
DECK-B side RV502

- Put TP501 into NORMAL MODE.

Specification: normal speed

Speed checker	Digital frequency counter
-0.66 to +0.66%	3000 ±20 Hz

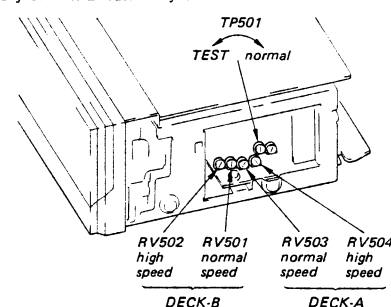
Frequency difference between DECK-A and DECK-B at the beginning of the tape should be within 1.5% (45 Hz).

Adjustment Location:

DECK-A side RV503
DECK-B side RV501

- If the specifications are not satisfied, repeat step 1 and 2.

Adjustment Location: system control board



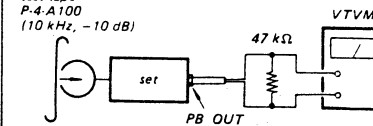
Record/playback Head Azimuth Adjustment

Procedure:

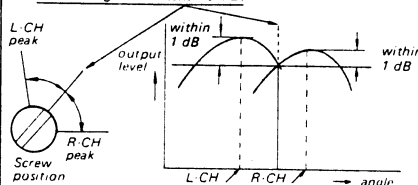
See page TC-10 for locations of REC IN and PB OUT.

- Mode: forward-playback

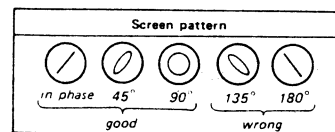
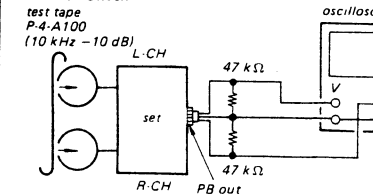
test tape P-4-A100 (10 kHz, -10 dB)



- Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screws until both of output levels match together within 1 dB.

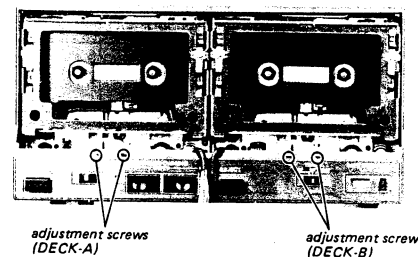


- Phase Check



- After the adjustment, lock the screws with locking compound.

Adjustment Location:



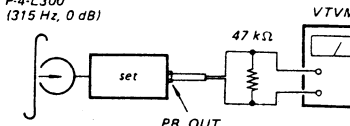
Playback Level Adjustment

Procedure:

See page TC-10 for locations of REC IN and PB OUT.

Mode: playback

test tape P-4-L300 (315 Hz, 0 dB)



Adjust:

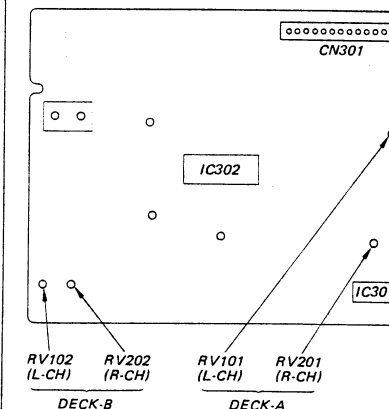
DECK-A side RV101 (L-CH), RV201 (R-CH)
DECK-B side RV102 (L-CH), RV202 (R-CH)
so that the specifications are satisfied.

Specification:

PB OUT level: 0.41 to 0.46 V (-5.5 to -4.5 dB)
Level difference between channels: less than 0.5 dB
Check that the PB OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location: audio board

[AUDIO BOARD] — Conductor Side —



FH-55W/50WX TC-55W/50WX

FH-55W/50WX TC-55W/50WX

FH-55W/50WX TC-55W/50WX

4-1. MOUNTING DIAGRAM

• See page TC-13 for Semiconductor Lead Layouts.

Record Bias Adjustment

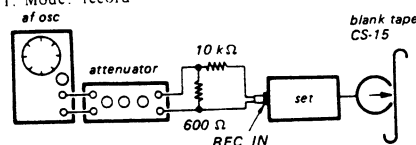
Setting:

- ATTENUATOR: standard record
(See page TC-10.)
- Put TP301, 502 into TEST MODE.

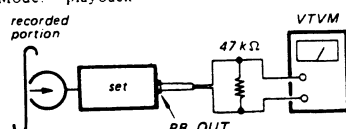
Procedure:

See page TC-16 for locations of REC IN and PB OUT.

1. Mode: record



2. Mode: playback



Confirm that the 10 kHz playback output is 0 ± 0.5 dB relative to the 315 Hz output. If necessary, adjust CT301-1 (L-CH), CT301-2 (R-CH) and repeat the steps given above.

- After adjustment, put TP301, 502 into NORMAL MODE.

Adjustment Location: audio board

Record Level Adjustment

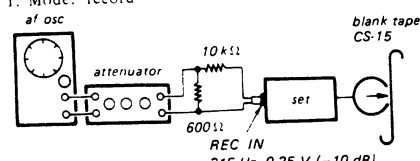
Setting:

- ATTENUATOR: standard record
(See page TC-10.)
- Put TP301, 502 into TEST MODE.

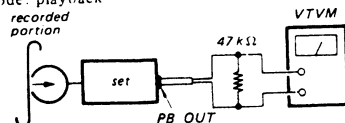
Procedure:

See page TC-16 for locations of REC IN and PB OUT.

1. Mode: record



2. Mode: playback



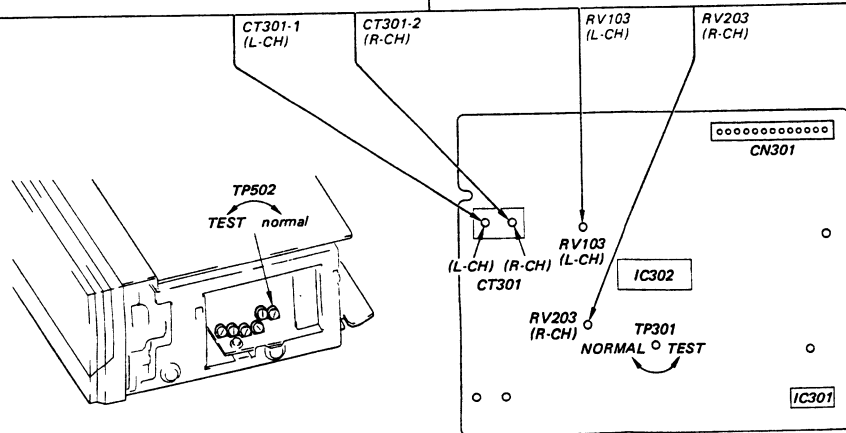
- Play back the signal recorded in step 1. Confirm that the signal level is within the specification below. If necessary, adjust RV103 (L-CH), RV203 (R-CH) and repeat the steps 1 - 3.

Specification:

PB OUT level: 0.41 to 0.46 V
(-5.5 to -4.5 dB)

- After adjustment, put TP301, 502 into NORMAL MODE.

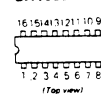
Adjustment Location: audio board



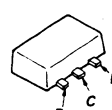
[AUDIO BOARD] - Conductor Side -

Semiconductor Lead Layouts

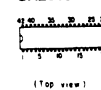
CX10034



2SB1094-L



CX20187

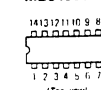


2SC2603F DTA114ES DTA144ES DTC114ES DTC144ES DTC143TS

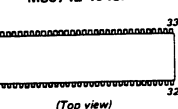
LA3160 M5218L



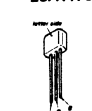
LA3220 MB84066B MB84069UB



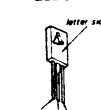
M50742-404SP



2SA1175



2SB731 2SD809-K

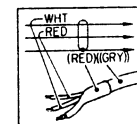


2SB1013 2SD1387



Note:

- Color code or sleeving over the end of the jacket.



- ○ : parts extracted from the component side.
- ● : parts extracted from the conductor side.
- ■ : part mounted on the conductor side.

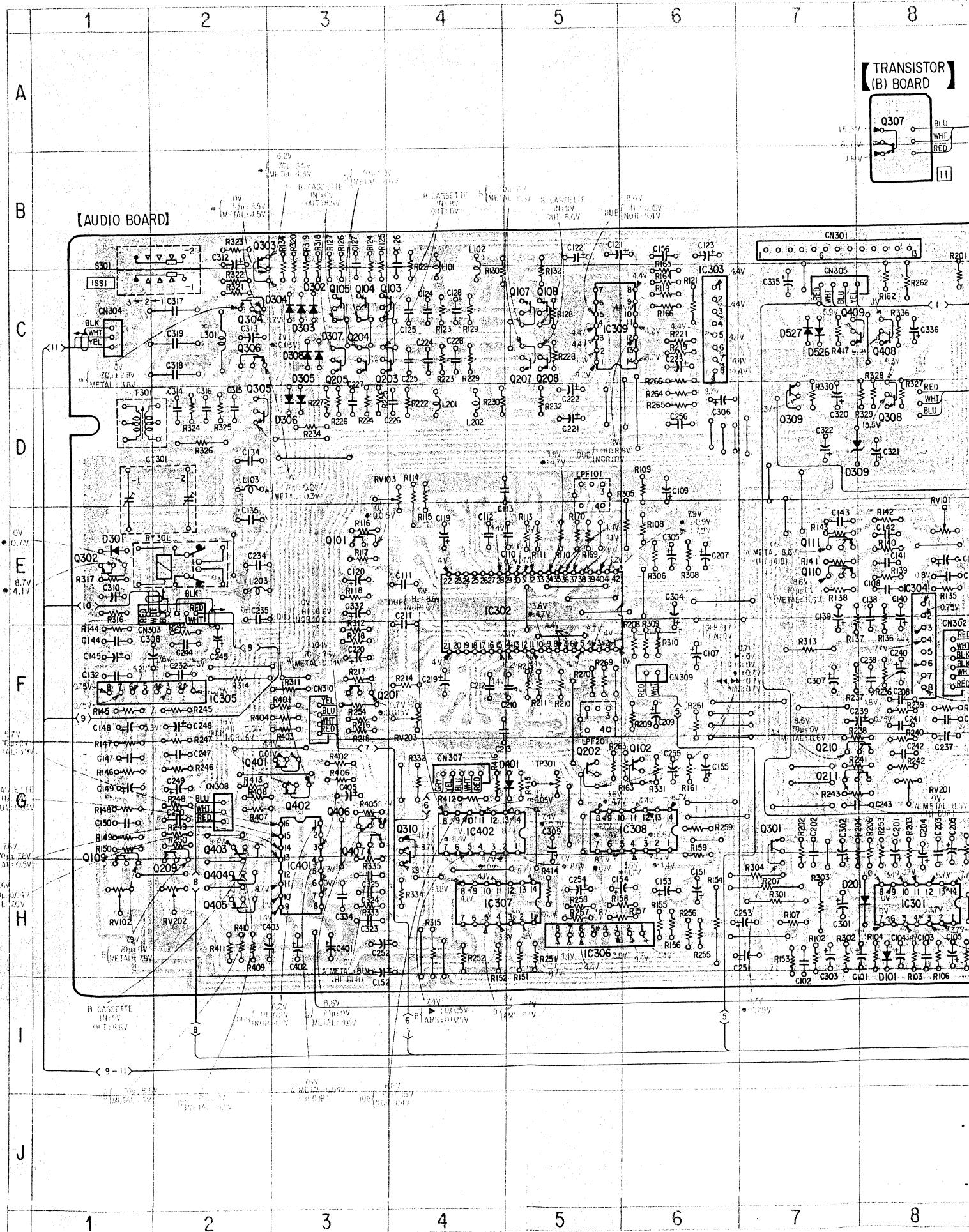
SEMICONDUCTOR LOCATION

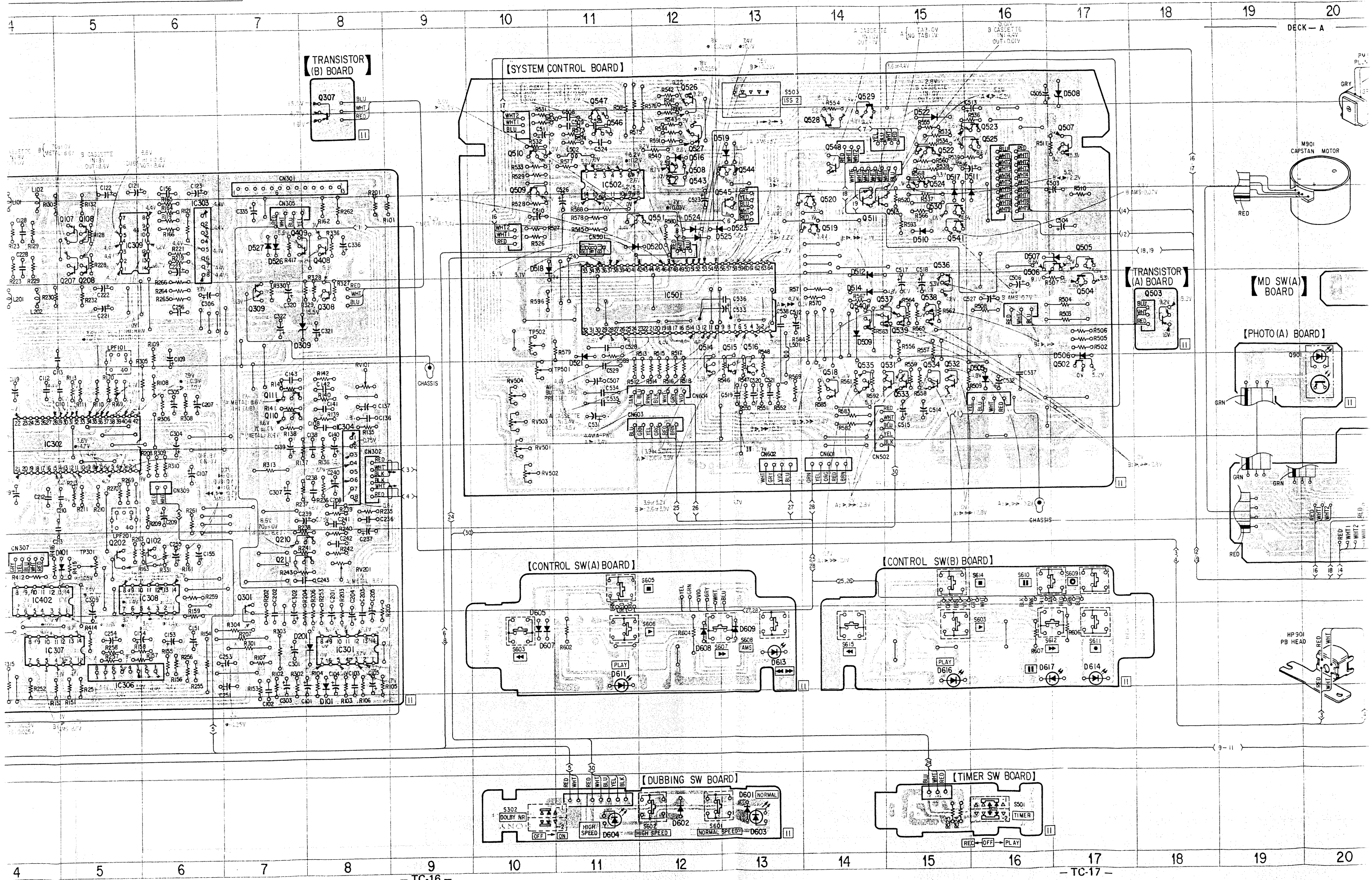
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	H-8	Q101	E-3	Q526	A-12
D201	H-8	Q102	G-6	Q527	B-12
D301	E-1	Q103	C-4	Q528	B-14
D302	C-3	Q104	C-3	Q529	A-14
D303	C-3	Q105	C-3	Q530	C-15
D304	C-3	Q107	C-5	Q531	E-15
D305	D-3	Q108	C-5	Q532	E-15
D306	D-3	Q109	G-1	Q533	E-15
D307	C-3	Q110	E-7	Q534	E-15
D308	C-3	Q111	E-7	Q535	E-14
D309	D-8	Q201	F-3	Q536	D-15
D401	G-5	Q202	G-5	Q537	D-15
D505	E-16	Q203	C-4	Q538	D-15
D506	E-17	Q204	C-3	Q539	D-15
D507	C-17	Q205	C-3	Q540	D-14
D508	A-17	Q207	C-5	Q541	C-15
D509	D-14	Q208	C-5	Q543	B-12
D510	C-15	Q209	G-2	Q544	B-13
D511	C-16	Q210	G-7	Q545	C-13
D512	D-14	Q211	G-7	Q546	B-11
D514	D-14	Q301	G-7	Q547	B-11
D516	B-12	Q302	E-1	Q548	B-14
D517	C-15	Q303	B-2	Q551	C-12
D518	C-10	Q304	C-2		
D519	B-13	Q305	D-2		
D520	C-12	Q306	C-2		
D521	D-11	Q307	A-8		
D522	B-15	Q308	D-8		
D523	C-13	Q309	D-7		
D524	C-12	Q310	G-4		
D525	C-12	Q401	G-3		
D526	C-7	Q402	G-3		
D527	C-7	Q403	G-2		
D601	J-13	Q404	H-2		
D602	J-12	Q405	H-2		
D603	J-13	Q406	G-3		
D604	J-11	Q407	G-3		
D605	H-10	Q408	C-7		
D607	H-10	Q409	C-7		
D608	H-12	Q502	E-17		
D609	H-13	Q503	D-18		
D611	H-11	Q504	D-17		
D613	H-13	Q505	C-17		
D614	H-17	Q506	C-17		
D616	H-15	Q507	B-17		
D617	H-17	Q508	B-12		
		Q509	B-10		
IC301	H-8	Q510	B-10		
IC302	E-4	Q511	C-14		
IC303	C-6	Q513	C-15		
IC304	F-8	Q514	E-12		
IC305	F-2	Q515	E-13		
IC306	H-5	Q516	E-13		
IC307	H-4	Q518	E-14		
IC308	G-6	Q519	C-14		
IC309	C-5	Q520	C-14		
IC401	H-3	Q522	B-15		
IC402	G-4	Q523	B-16		
IC501	D-12	Q524	B-15		
IC502	B-11	Q525	B-16		

SECTION 4
DIAGRAMS

FH-55W/50WX
TC-55W/50WX

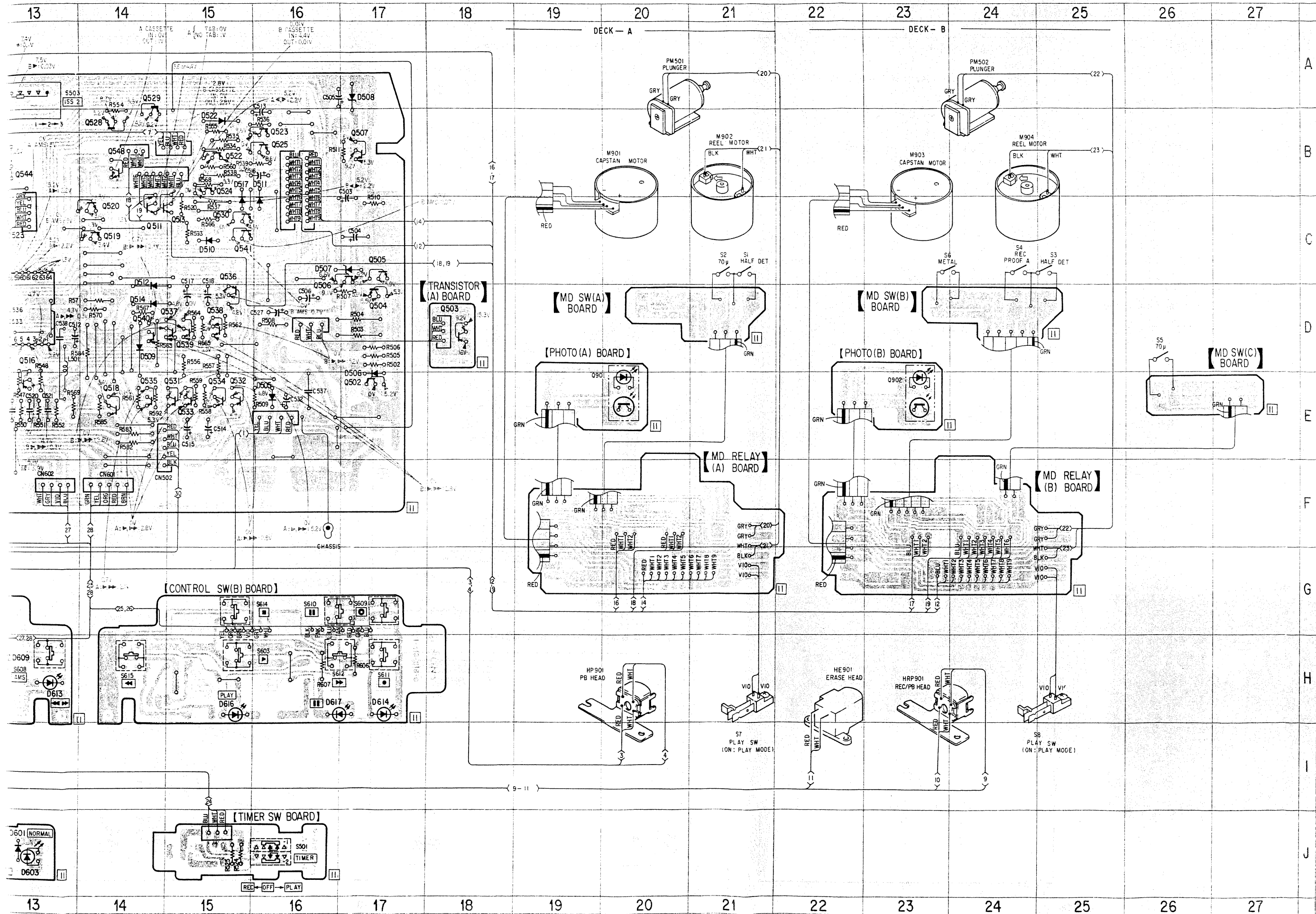
FH-55W/50WX
TC-55W/50WX





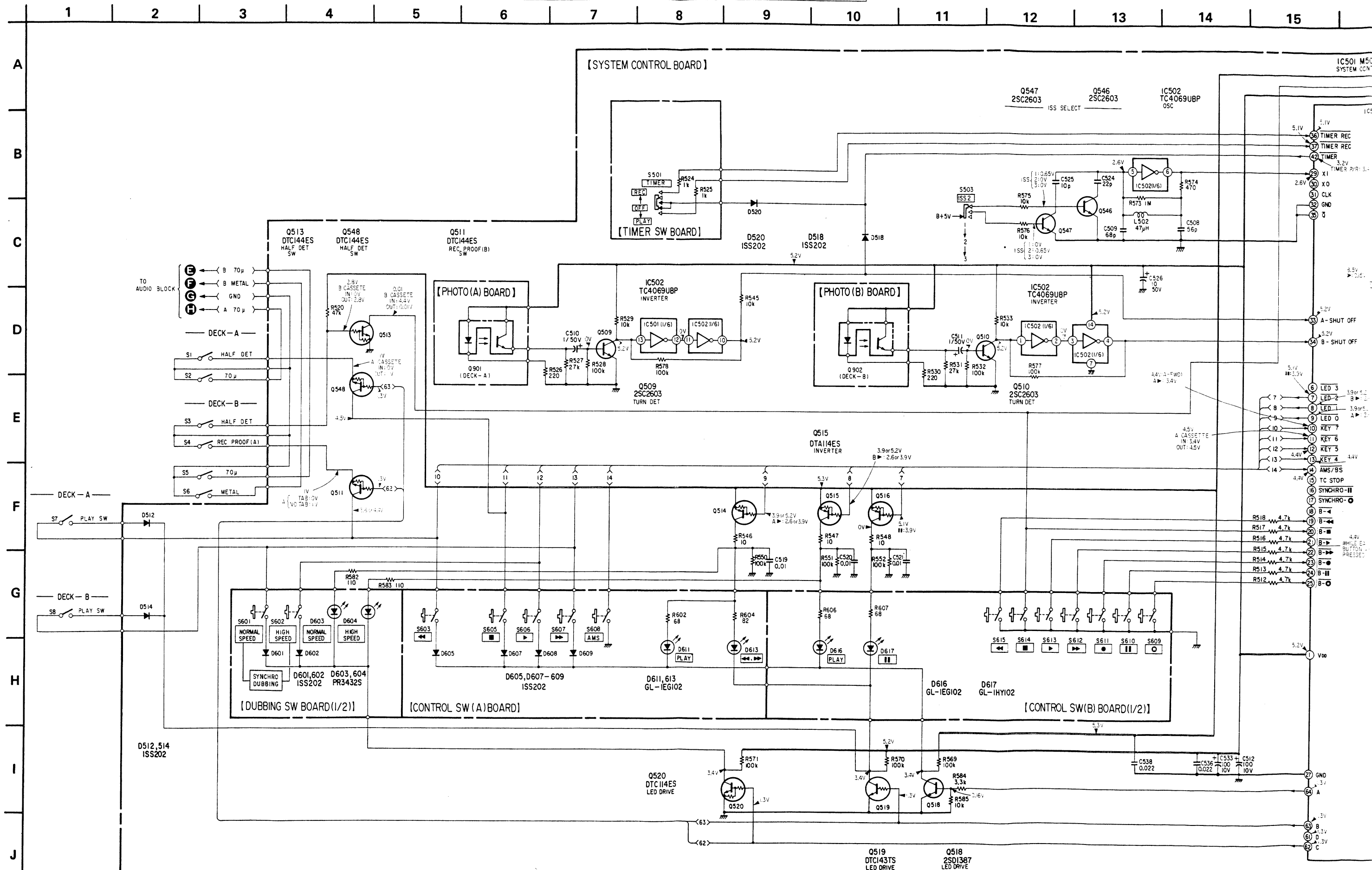
FH-55W/50WX
TC-55W/50WX

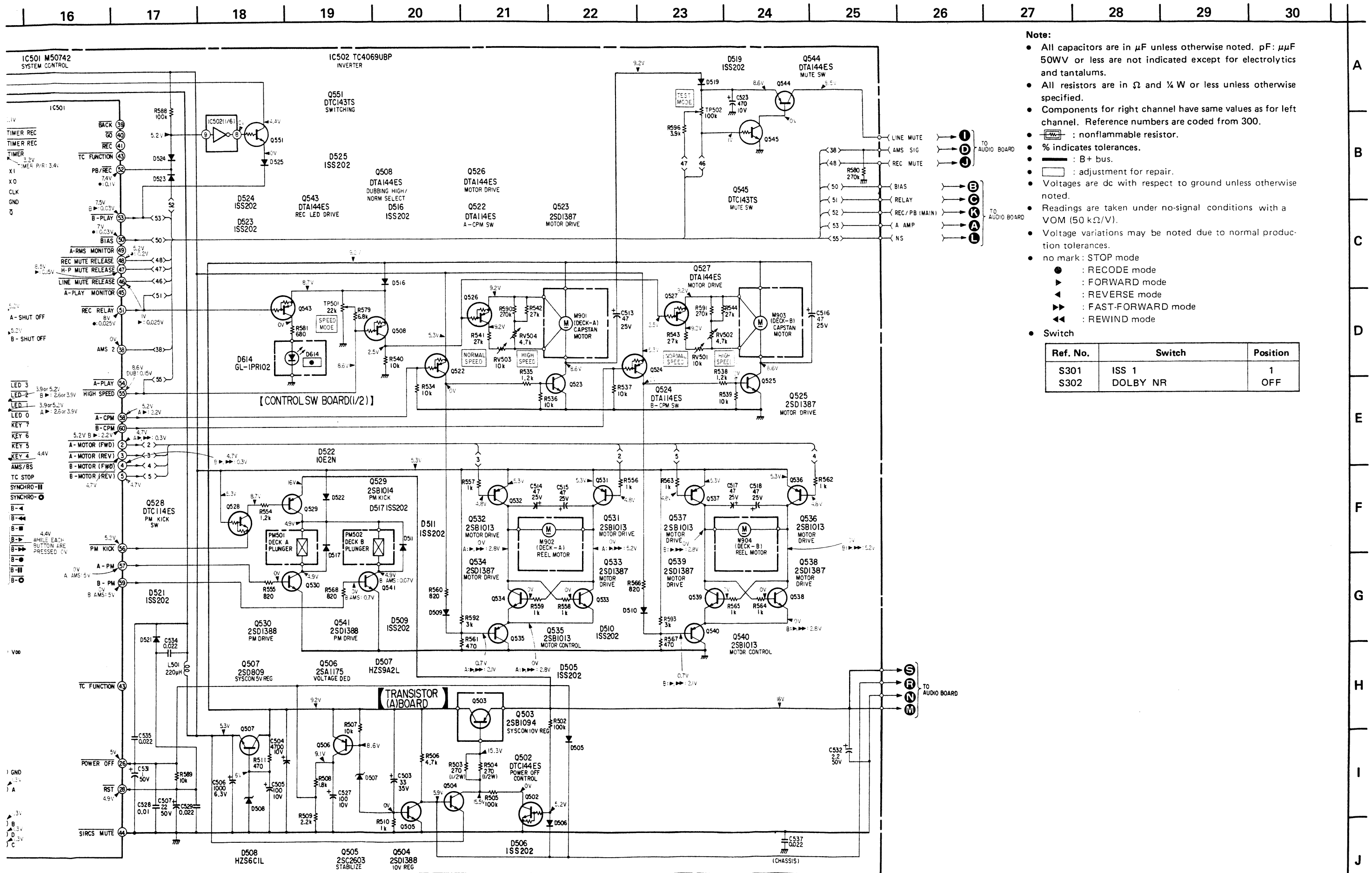
FH-55W/50WX
TC-55W/50WX



FH-55W/50WX TC-55W/50WX **FH-55W/50WX TC-55W/50WX**

4-2. SCHEMATIC DIAGRAM — SYSTEM CONTROL SECTION —



**Note:**

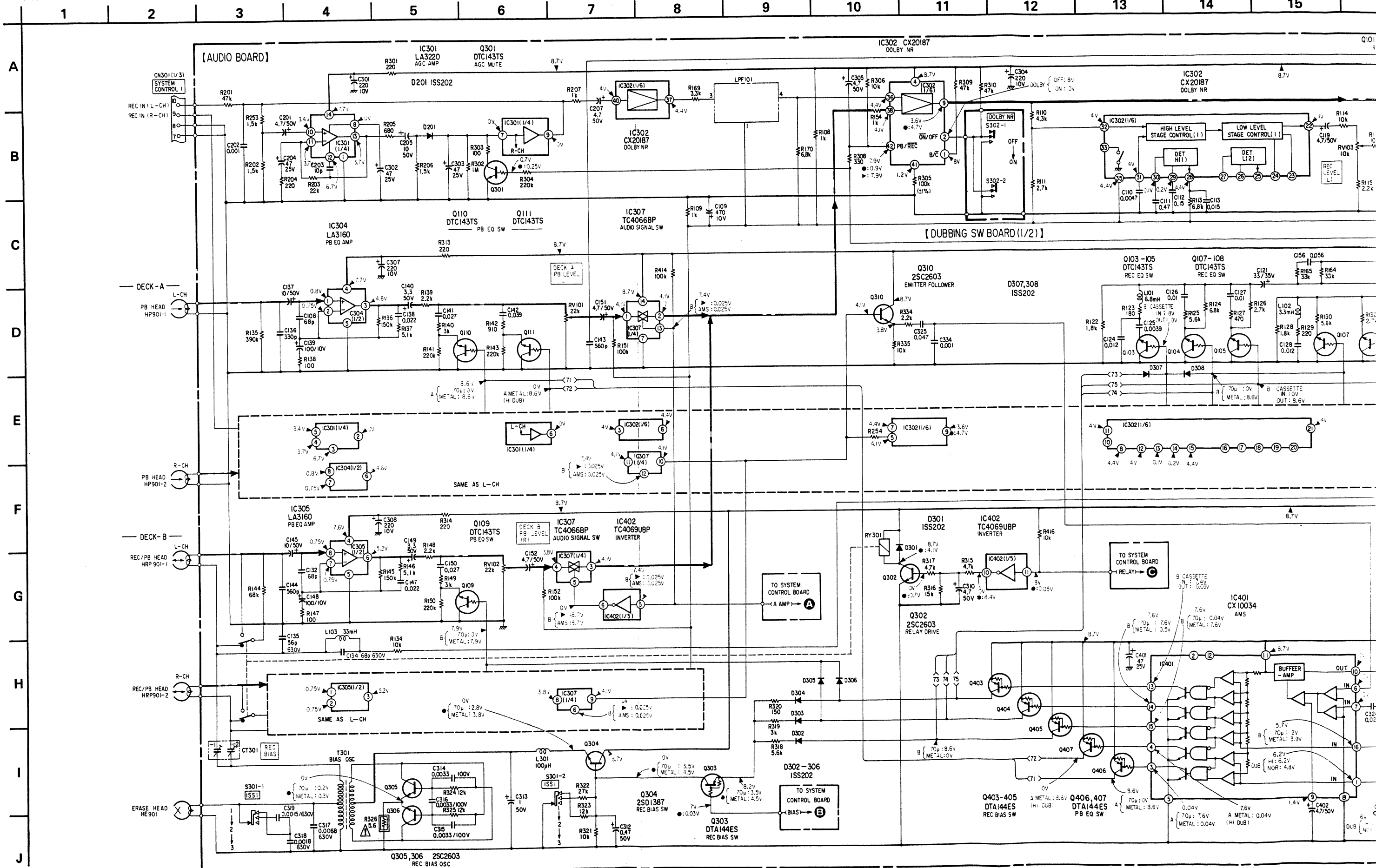
- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- Components for right channel have same values as for left channel. Reference numbers are coded from 300.
- \square : nonflammable resistor.
- % indicates tolerances.
- \square : B+ bus.
- \square : adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50 k Ω /V).
- Voltage variations may be noted due to normal production tolerances.
- no mark: STOP mode
 - \bullet : RECODE mode
 - \blacktriangle : FORWARD mode
 - \blacktriangleleft : REVERSE mode
 - \blacktriangleright : FAST-FORWARD mode
 - $\blacktriangleleft\blacktriangleright$: REWIND mode

Switch

Ref. No.	Switch	Position
S301	ISS 1	1
S302	DOLBY NR	OFF

FH-55W/50WX TC-55W/50WX **FH-55W/50WX TC-55W/50WX**

4-3. SCHEMATIC DIAGRAM — AUDIO BOARD SECTION —



FH-55W/50WX
TC-55W/50WX



FH-55W/50WX TC-55W/50WX

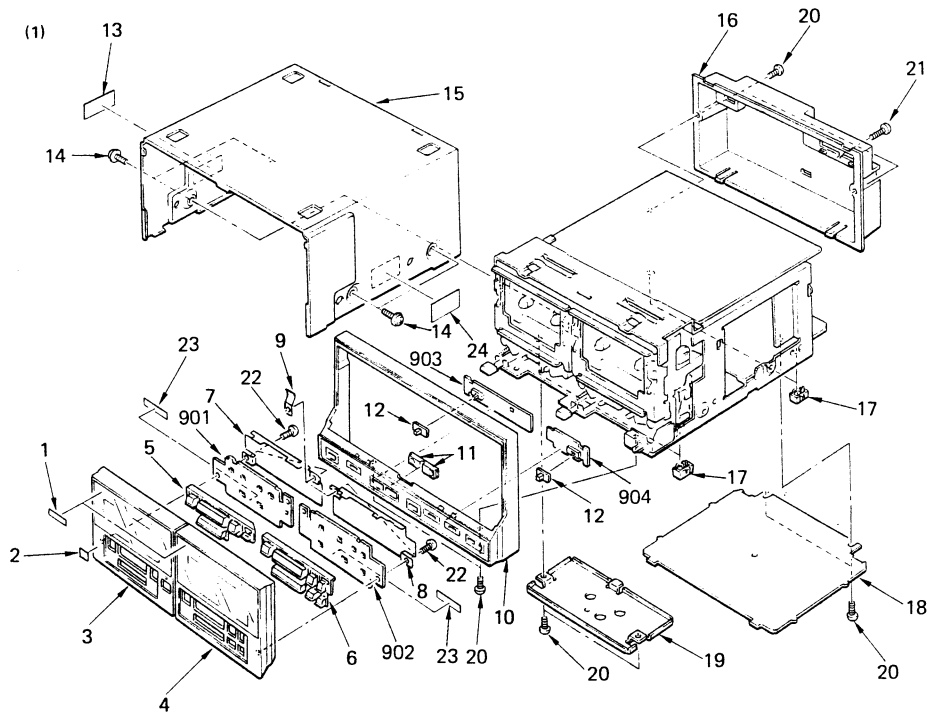
SECTION 5 EXPLODED VIEWS AND PARTS LIST

NOTE:

The mechanical parts with no reference number in the exploded views are not supplied.

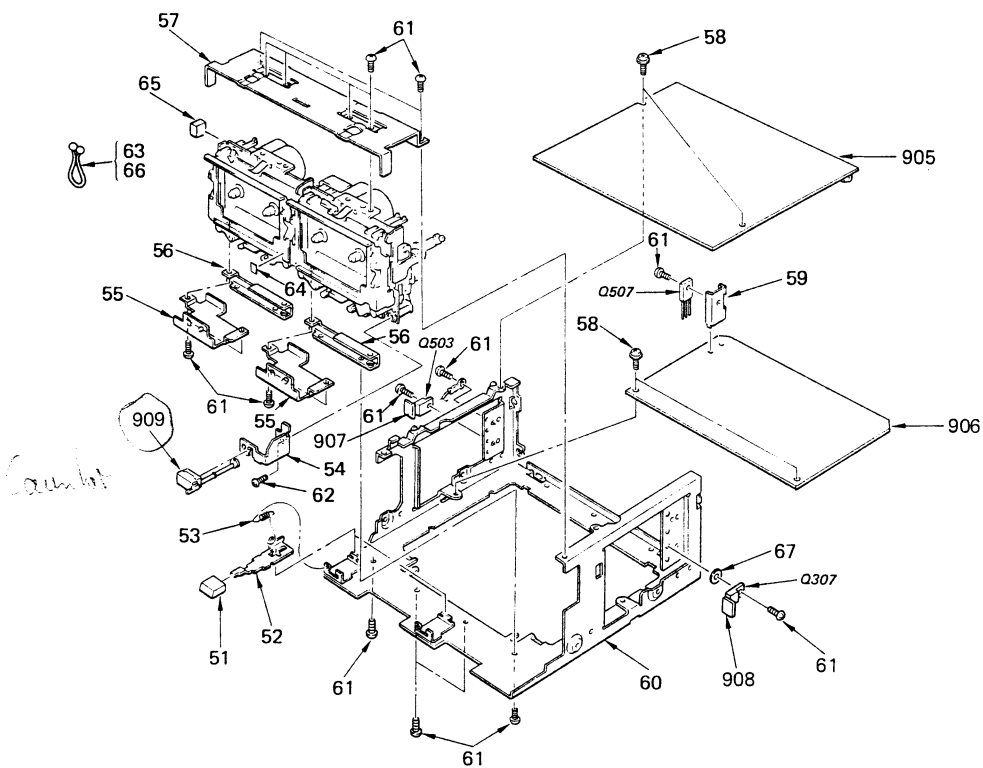
The construction parts of an assembled part are indicated with a collation number in the remark column.

Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.



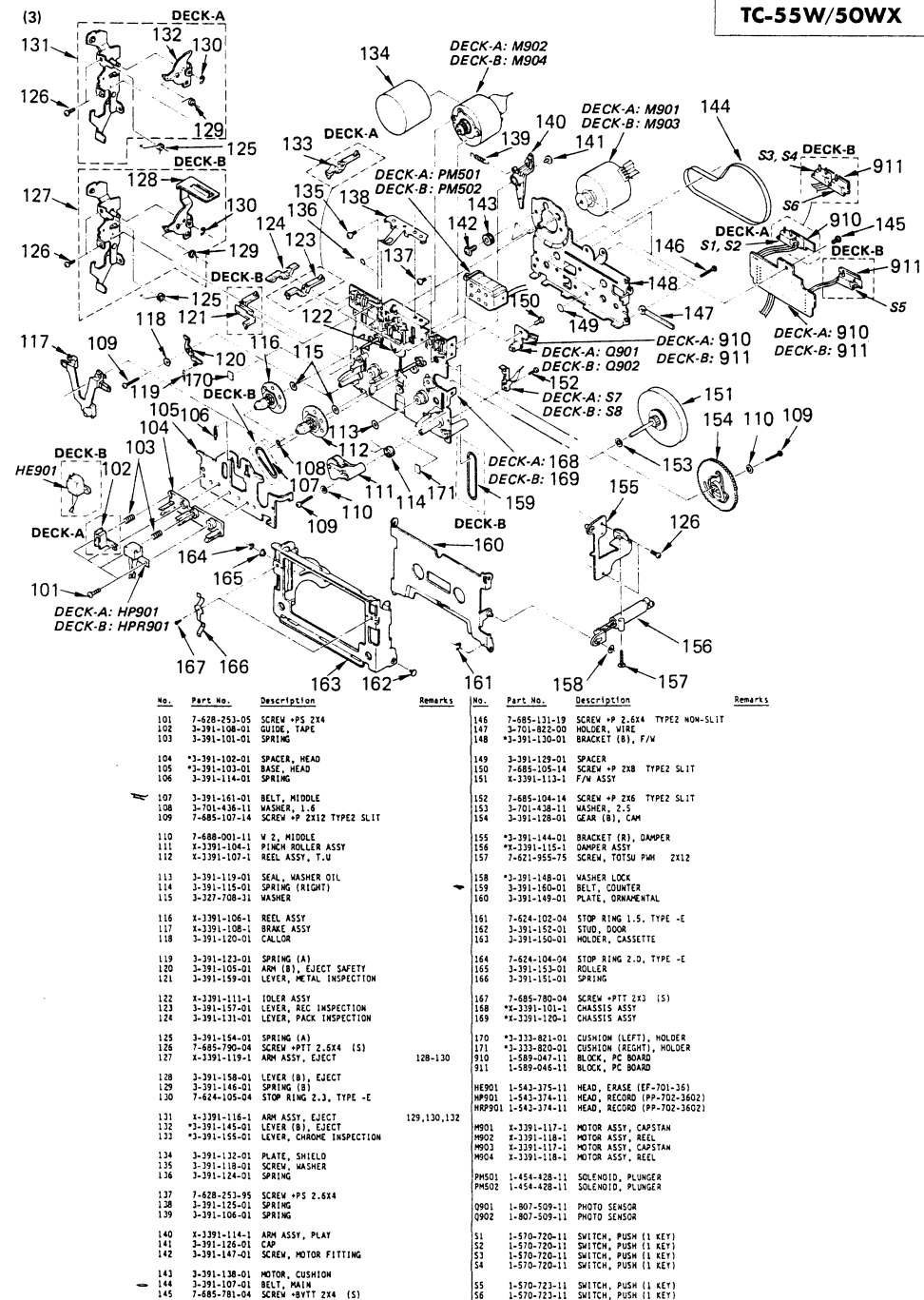
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-911-673-01	SEAL, COVER		14	4-886-821-01	SCREW, M3 CASE	
2	3-703-713-41	STICKER, SONY SYMBOL (10)		15	3-325-595-01	CASE	
3	X-3325-530-1	LID (A) ASSY, CASSETTE		16	*3-325-561-11	PLATE, JACK	
4	X-3325-526-1	(TC-50WX)...LID (B) ASSY, CASSETTE		17	X-4902-937-1	FOOT ASSY, RUBBER	
	X-3325-531-1	(TC-55W)...LID (B) ASSY, CASSETTE		18	*3-325-594-01	PLATE, BOTTOM	
5	X-3325-544-1	BUTTON, ASSY (A)		19	*3-325-599-01	COVER, WIRING	
7	3-333-801-01	PLATE (A), SHIELD		20	7-685-871-01	SCREW +BVTT 3X6 (S)	
8	3-333-802-01	PLATE (B), SHIELD		21	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	
9	3-333-813-01	SPRING (B)		22	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
10	X-3325-532-1	PANEL ASSY, FRONT		23	3-573-629-21	CUSHION (B)	
11	3-325-544-11	BUTTON (B), DUBBING		24	3-703-978-01	(TC-50WX)...LABEL (A), FIRE CAUTION	
12	3-323-415-31	KNOB, SWITCH TIMER		901	*A-2056-336-A	MOUNTED PCB, AUDIO	
13	*3-325-584-01	(TC-50WX)...LABEL, MODEL NUMBER (W)		902	*A-2056-336-A	MOUNTED PCB, AUDIO	
	*3-325-589-01	(TC-55W)...LABEL, MODEL NUMBER (W)		903	*A-2056-336-A	MOUNTED PCB, AUDIO	
				904	*A-2056-336-A	MOUNTED PCB, AUDIO	

(2)



No.	Part No.	Description
51	3-329-952-11	BUTTON, EJECT
52	*3-325-590-01	SLIDER, EJECT
53	3-578-393-00	SPRING, TENSION
54	*3-325-593-01	BRACKET, COUNTER
55	3-333-818-01	PLATE, SHIELD, HEAD
56	*3-325-598-01	BRACKET, MD
57	3-333-803-01	JOINT
58	3-703-249-01	SCREW, S TIGHT, +PTTWH 3X6
59	*3-312-615-31	HEAT SINK
60	*X-3325-527-1	CHASSIS ASSY (W)
61	7-685-871-01	SCREW +BVTY 3X6 (S)
62	7-685-104-14	SCREW + 2X6 TYPE2 NON-SLIT
63	*3-703-321-01	PURSE PUCK (DIA. 16)

Remarks	No.	Part No.	Description	Remarks
	64	3-831-441-XX	CUSHION (A)	
	65	9-911-841-XX	CUSHION	
	66	*2-056-665-00	HOLDER, WIRE (PURCE LOCK 5 DIA)	
	67	3-572-365-11	SHEET, INSULATING	
	905	*A-2056-336-A	MOUNTED PCB, AUDIO	
	906	*A-2056-336-A	MOUNTED PCB, AUDIO	
	907	*A-2056-336-A	MOUNTED PCB, AUDIO	
	908	*A-2056-336-A	MOUNTED PCB, AUDIO	
	909	1-548-585-31	COUNTER, TAPE (SMALL TYPE)	
	Q307	8-729-111-67	TRANSISTOR 2S81094-L	
	Q503	8-729-111-67	TRANSISTOR 2S81094-L	
	Q507	8-729-180-92	TRANSISTOR 2SD089-K	



SECTION 6
ELECTRICAL PARTS LIST

NOTE:

Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: uF, PF: uF.

RESISTORS

All resistors are in ohms.

F : nonflammable

COILS

MMH : mH, UH : uH

SEMICONDUCTORS

In each case, U : u, for example:

UA... uA..., UPA... uPA..., UPC... uPC,

UPD... uPD...

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	*A-2056-336-A	MOUNTED PCB, AUDIO
902	*A-2056-336-A	MOUNTED PCB, AUDIO
903	*A-2056-336-A	MOUNTED PCB, AUDIO
904	*A-2056-336-A	MOUNTED PCB, AUDIO
905	*A-2056-336-A	MOUNTED PCB, AUDIO
906	*A-2056-336-A	MOUNTED PCB, AUDIO
907	*A-2056-336-A	MOUNTED PCB, AUDIO
908	*A-2056-336-A	MOUNTED PCB, AUDIO
909	1-548-585-31	COUNTER, TAPE (SMALL TYPE)
910	1-589-047-11	BLOCK, PC BOARD
911	1-589-046-11	BLOCK, PC BOARD
C101	1-124-927-11	ELECT 4.7MF 20% 50V
C102	1-162-294-31	CERAMIC 0.001MF 10% 50V
C103	1-162-199-31	CERAMIC 10PF 5% 50V
C104	1-124-477-11	ELECT 47MF 20% 25V
C105	1-124-907-00	ELECT 10MF 20% 50V
C107	1-124-927-11	ELECT 4.7MF 20% 50V
C108	1-162-219-31	CERAMIC 68PF 5% 50V
C109	1-124-472-11	ELECT 470MF 20% 10V
C110	1-110-203-00	MYLAR 0.0047MF 5% 50V
C111	1-136-173-00	FILM 0.47MF 5% 50V
C112	1-136-167-00	FILM 0.15MF 5% 50V
C113	1-136-155-00	FILM 0.015MF 5% 50V
C119	1-124-927-11	ELECT 4.7MF 20% 50V
C120	1-124-927-11	ELECT 4.7MF 20% 50V
C121	1-124-482-11	ELECT 33MF 20% 35V
C122	1-124-482-11	ELECT 33MF 20% 35V
C123	1-124-927-11	ELECT 4.7MF 20% 50V
C124	1-136-154-00	FILM 0.012MF 5% 50V
C125	1-110-202-00	MYLAR 0.0039MF 5% 50V
C126	1-136-153-00	FILM 0.01MF 5% 50V
C127	1-136-153-00	FILM 0.01MF 5% 50V
C128	1-136-154-00	FILM 0.012MF 5% 50V
C132	1-162-219-31	CERAMIC 68PF 5% 630V
C134	1-136-272-00	FILM 68PF 5% 630V
C135	1-136-271-00	FILM 56PF 5% 630V
C136	1-162-288-31	CERAMIC 330PF 10% 50V
C137	1-124-907-00	ELECT 10MF 20% 50V
C138	1-136-157-00	FILM 0.022MF 5% 50V
C139	1-124-443-00	ELECT 100MF 20% 10V
C140	1-124-905-11	ELECT 3.3MF 20% 50V
C141	1-136-158-00	FILM 0.027MF 5% 50V
C142	1-136-160-00	FILM 0.039MF 5% 50V
C143	1-162-291-31	CERAMIC 560PF 10% 50V
C144	1-162-291-31	CERAMIC 560PF 10% 50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C145	1-124-907-00	ELECT 10MF 20% 50V
C147	1-136-157-00	FILM 0.022MF 5% 50V
C148	1-124-443-00	ELECT 100MF 20% 10V
C149	1-124-905-11	ELECT 3.3MF 20% 50V
C150	1-136-158-00	FILM 0.027MF 5% 50V
C151	1-124-927-11	ELECT 4.7MF 20% 50V
C152	1-124-927-11	ELECT 4.7MF 20% 50V
C153	1-124-927-11	ELECT 4.7MF 20% 50V
C154	1-124-482-11	ELECT 33MF 20% 35V
C155	1-124-907-00	ELECT 10MF 20% 50V
C156	1-136-162-00	FILM 0.056MF 5% 50V
C201	1-124-927-11	ELECT 4.7MF 20% 50V
C202	1-162-294-31	CERAMIC 0.001MF 10% 50V
C203	1-162-199-31	CERAMIC 10PF 5% 50V
C204	1-124-477-11	ELECT 47MF 20% 25V
C205	1-124-907-00	ELECT 10MF 20% 50V
C207	1-124-927-11	ELECT 4.7MF 20% 50V
C208	1-162-219-31	CERAMIC 68PF 5% 50V
C209	1-124-472-11	ELECT 470MF 20% 10V
C210	1-110-203-00	MYLAR 0.0047MF 5% 50V
C211	1-136-173-00	FILM 0.47MF 5% 50V
C212	1-136-167-00	FILM 0.15MF 5% 50V
C213	1-136-155-00	FILM 0.015MF 5% 50V
C219	1-124-927-11	ELECT 4.7MF 20% 50V
C220	1-124-927-11	ELECT 4.7MF 20% 50V
C221	1-124-482-11	ELECT 33MF 20% 35V
C222	1-124-482-11	ELECT 33MF 20% 35V
C223	1-124-927-11	ELECT 4.7MF 20% 50V
C224	1-136-154-00	FILM 0.012MF 5% 50V
C225	1-110-202-00	MYLAR 0.0039MF 5% 50V
C226	1-136-153-00	FILM 0.01MF 5% 50V
C227	1-136-153-00	FILM 0.01MF 5% 50V
C228	1-136-154-00	FILM 0.012MF 5% 50V
C232	1-162-219-31	CERAMIC 68PF 5% 50V
C234	1-136-272-00	FILM 68PF 5% 630V
C235	1-136-271-00	FILM 56PF 5% 630V
C236	1-162-288-31	CERAMIC 330PF 10% 50V
C237	1-124-907-00	ELECT 10MF 20% 50V
C238	1-136-157-00	FILM 0.022MF 5% 50V
C239	1-124-443-00	ELECT 100MF 20% 10V
C240	1-124-905-11	ELECT 3.3MF 20% 50V
C241	1-136-158-00	FILM 0.027MF 5% 50V
C242	1-136-160-00	FILM 0.039MF 5% 50V
C243	1-162-291-31	CERAMIC 560PF 10% 50V
C244	1-162-291-31	CERAMIC 560PF 10% 50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C245	1-124-907-00	ELECT 10MF 20% 50V
C247	1-136-157-00	FILM 0.022MF 5% 50V
C248	1-124-443-00	ELECT 100MF 20% 10V
C249	1-124-905-11	ELECT 3.3MF 20% 50V
C250	1-136-158-00	FILM 0.027MF 5% 50V
C251	1-124-927-11	ELECT 4.7MF 20% 50V
C252	1-124-927-11	ELECT 4.7MF 20% 50V
C253	1-124-927-11	ELECT 4.7MF 20% 50V
C254	1-124-482-11	ELECT 33MF 20% 35V
C255	1-124-907-00	ELECT 10MF 20% 50V
C256	1-136-162-00	FILM 0.056MF 5% 50V
C301	1-124-444-00	ELECT 220MF 20% 10V
C302	1-124-477-11	ELECT 47MF 20% 25V
C303	1-124-477-11	ELECT 47MF 20% 25V
C304	1-124-444-00	ELECT 220MF 20% 10V
C305	1-124-927-11	ELECT 4.7MF 20% 50V
C306	1-124-477-11	ELECT 47MF 20% 25V
C307	1-124-444-00	ELECT 220MF 20% 10V
C308	1-124-444-00	ELECT 220MF 20% 10V
C309	1-124-477-11	ELECT 47MF 20% 25V
C310	1-124-927-11	ELECT 4.7MF 20% 50V
C312	1-124-902-00	ELECT 0.47MF 20% 50V
C313	1-124-903-00	ELECT 1MF 20% 50V
C314	1-130-285-00	FILM 0.0033MF 5% 100V
C315	1-130-285-00	FILM 0.0033MF 5% 100V
C316	1-130-285-00	FILM 0.0033MF 5% 100V
C317	1-130-336-00	FILM 0.0068MF 10% 630V
C318	1-129-705-00	FILM 0.0018MF 10% 630V
C319	1-130-061-00	FILM 0.0015MF 10% 630V
C320	1-124-120-11	ELECT 220MF 20% 25V
C321	1-124-482-11	ELECT 33MF 20% 35V
C322	1-124-473-11	ELECT 1000MF 20% 10V
C323	1-162-294-31	CERAMIC 0.001MF 10% 50V
C324	1-136-157-00	FILM 0.022MF 5% 50V
C325	1-136-161-00	FILM 0.047MF 5% 50V
C332	1-124-903-00	ELECT 1MF 20% 50V
C334	1-162-294-31	CERAMIC 0.001MF 10% 50V
C335	1-124-478-11	ELECT 100MF 20% 25V
C336	1-124-907-00	ELECT 10MF 20% 50V
C401	1-124-477-11	ELECT 47MF 20% 25V
C402	1-124-927-11	ELECT 4.7MF 20% 50V
C403	1-124-903-00	ELECT 1MF 20% 50V
C405	1-124-907-00	ELECT 10MF 20% 50V
C503	1-124-482-11	ELECT 33MF 20% 35V
C504	1-124-762-00	ELECT 4700MF 20% 10V
C505	1-124-443-00	ELECT 100MF 20% 10V
C506	1-124-471-00	ELECT 1000MF 20% 6.3V
C507	1-124-908-11	ELECT 22MF 20% 50V
C508	1-162-217-31	CERAMIC 56PF 5% 50V
C509	1-162-219-31	CERAMIC 68PF 5% 50V
C510	1-124-903-00	ELECT 1MF 20% 50V
C511	1-124-903-00	ELECT 1MF 20% 50V
C512	1-124-443-00	ELECT 100MF 20% 10V
C513	1-124-477-11	ELECT 47MF 20% 25V
C514	1-124-477-11	ELECT 47MF 20% 25V
C515	1-124-477-11	ELECT 47MF 20% 25V
C516	1-124-477-11	ELECT 47MF 20% 25V

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C517	1-124-477-11	ELECT 47MF 20% 25V
C518	1-124-477-11	ELECT 47MF 20% 25V
C519	1-162-306-31	CERAMIC 0.01MF 30% 16V
C520	1-162-306-31	CERAMIC 0.01MF 30% 16V
C521	1-162-306-31	CERAMIC 0.01MF 30% 16V
C523	1-124-472-11	ELECT 470MF 20% 10V
C524	1-162-207-31	CERAMIC 22PF 5% 50V
C525	1-162-199-31	CERAMIC 10PF 5% 50V
C526	1-124-907-00	ELECT 10MF 20% 50V
C527	1-124-443-00	ELECT 100MF 20% 10V
C528	1-162-306-31	CERAMIC 0.01MF 30% 16V
C529	1-161-494-00	CERAMIC 0.022MF 30% 25V
C531	1-124-903-00	ELECT 1MF 20% 50V
C532	1-124-257-00	ELECT 2.2MF 20% 50V
C533	1-124-443-00	ELECT 100MF 20% 10V
C534	1-161-494-00	CERAMIC 0.022MF 30% 25V
C535	1-161-494-00	CERAMIC 0.022MF 30% 25V
C536	1-161-494-00	CERAMIC 0.022MF 30% 25V
C537	1-161-494-00	CERAMIC 0.022MF 30% 25V
C538	1-161-494-00	CERAMIC 0.022MF 30% 25V
CN301	1-562-068-13	SOCKET, CONNECTOR 13P
CN302	*1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P
CN303	*1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P
CN304	*1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P
CN305	*1-564-507-31	PLUG, CONNECTOR 4P
CN307	*1-564-339-00	PIN, CONNECTOR 5P
CN308	*1-564-337-00	PIN, CONNECTOR 3P
CN309	*1-564-505-11	PLUG, CONNECTOR 4P
CN310	*1-564-338-00	PIN, CONNECTOR 4P
CN501	*1-564-506-11	PLUG, CONNECTOR 3P
CN502	*1-564-508-11	PLUG, CONNECTOR 5P
CN601	*1-564-508-11	PLUG, CONNECTOR 5P
CN602	*1-564-507-11	PLUG, CONNECTOR 4P
CN603	*1-564-509-11	PLUG, CONNECTOR 6P
CN604	*1-564-510-11	PLUG, CONNECTOR 7P
CT301	1-141-225-00	CAP, TUNING, TRIMAR
D101	8-719-911-19	DIODE 1SS119
D201	8-719-911-19	DIODE 1SS119
D301	8-719-911-19	DIODE 1SS119
D302	8-719-911-19	DIODE 1SS119
D303	8-719-911-19	DIODE 1SS119
D304	8-719-911-19	DIODE 1SS119
D305	8-719-911-19	DIODE 1SS119
D306	8-719-911-19	DIODE 1SS119
D307	8-719-911-19	DIODE 1SS119
D308	8-719-911-19	DIODE 1SS119
D309	8-719-933-54	DIODE HZ59AZL
D401	8-719-911-19	DIODE 1SS119
D505	8-719-911-19	DIODE 1SS119
D506	8-719-911-19	DIODE 1SS119
D507	8-719-933-54	DIODE HZ59AZL
D508	8-719-933-39	DIODE HZ56C1L
D509	8-719-911-19	DIODE 1SS119
D510	8-719-911-19	DIODE 1SS119
D511	8-719-911-19	DIODE 1SS119
D512	8-719-911-19	DIODE 1SS119
D514	8-719-911-19	DIODE 1SS119

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D516	8-719-911-19	DIODE 1SS119
D517	8-719-911-19	DIODE 1SS119
D518	8-719-911-19	DIODE 1SS119
D519	8-719-911-19	DIODE 1SS119
D520	8-719-911-19	DIODE 1SS119
D521	8-719-911-19	DIODE 1SS119
D522	8-719-200-77	DIODE 10E2N
D523	8-719-911-19	DIODE 1SS119
D524	8-719-911-19	DIODE 1SS119
D525	8-719-911-19	DIODE 1SS119
D526	8-719-911-19	DIODE 1SS119
D527	8-719-911-19	DIODE 1SS119
D601	8-719-911-19	DIODE 1SS119
D602	8-719-911-19	DIODE 1SS119
D603	8-719-912-41	DIODE TLR124
D604	8-719-912-41	DIODE TLR124
D605	8-719-911-19	DIODE 1SS119
D607	8-719-911-19	DIODE 1SS119
D608	8-719-911-19	DIODE 1SS119
D609	8-719-911-19	DIODE 1SS119
D611	8-719-918-67	DIODE GL-1EG102
D613	8-719-918-67	DIODE GL-1EG102
D614	8-719-918-65	DIODE GL-1PR102
D616	8-719-918-67	DIODE GL-1EG102
D617	8-719-918-66	DIODE GL-1HY102
HE901	1-543-375-11	HEAD, ERASE (EF-701-36)
HRP901	1-543-374-11	HEAD, RECORD (PP-702-3602)
HRP901	1-543-374-11	HEAD, RECORD (PP-702-3602)
IC301	8-759-800-92	IC LA3220
IC302	8-752-018-70	IC CX20187
IC303	8-759-600-02	IC M5218L
IC304	8-759-800-36	IC LA3160
IC305	8-759-800-36	IC LA3160
IC306	8-759-600-02	IC M5218L
IC307	8-759-240-66	IC TC4066BP
IC308	8-759-240-66	IC TC4066BP
IC309	8-759-240-66	IC TC4066BP
IC401	8-759-700-46	IC CX10034
IC402	8-759-240-69	IC TC4069UBP
IC501	8-759-603-20	IC M50742-404SP
IC502	8-759-240-69	IC TC4069UBP
L101	1-408-922-00	MICRO INDUCTOR 6.8MMH
L102	1-408-918-11	MICRO INDUCTOR 3.3MMH
L103	1-408-930-00	MICRO INDUCTOR 33MMH
L201	1-408-922-00	MICRO INDUCTOR 6.8MMH
L202	1-408-918-11	MICRO INDUCTOR 3.3MMH
L203	1-408-930-00	MICRO INDUCTOR 33MMH
L301	1-408-080-00	MICRO INDUCTOR 100UH
L501	1-408-088-00	MICRO INDUCTOR 220UH
L502	1-408-571-00	MICRO INDUCTOR 47UH
LPF101	1-235-827-11	FILTER, LOW PASS
LPF201	1-235-827-11	FILTER, LOW PASS
M901	X-3391-117-1	MOTOR ASSY, CAPSTAN
M902	X-3391-118-1	MOTOR ASSY, REEL
M903	X-3391-117-1	MOTOR ASSY, CAPSTAN
M904	X-3391-118-1	MOTOR ASSY, REEL

ELECTRICAL PARTS

Ref.No.	Part No.	Description
PM501	1-454-428-11	SOLENOID, PLUNGER
PM502	1-454-428-11	SOLENOID, PLUNGER
Q101	8-729-606-33	TRANSISTOR 2SC2603F
Q102	8-729-606-33	TRANSISTOR 2SC2603F
Q103	8-729-900-74	TRANSISTOR DTC143TS
Q104	8-729-900-74	TRANSISTOR DTC143TS
Q105	8-729-900-74	TRANSISTOR DTC143TS
Q107	8-729-900-74	TRANSISTOR DTC143TS
Q108	8-729-900-74	TRANSISTOR DTC143TS
Q109	8-729-900-74	TRANSISTOR DTC143TS
Q110	8-729-900-74	TRANSISTOR DTC143TS
Q111	8-729-900-74	TRANSISTOR DTC143TS
Q201	8-729-606-33	TRANSISTOR 2SC2603F
Q202	8-729-606-33	TRANSISTOR 2SC2603F
Q203	8-729-900-74	TRANSISTOR DTC143TS
Q204	8-729-900-74	TRANSISTOR DTC143TS
Q205	8-729-900-74	TRANSISTOR DTC143TS
Q207	8-729-900-74	TRANSISTOR DTC143TS
Q208	8-729-900-74	TRANSISTOR DTC143TS
Q209	8-729-900-74	TRANSISTOR DTC143TS
Q210	8-729-900-74	TRANSISTOR DTC143TS
Q211	8-729-900-74	TRANSISTOR DTC143TS
Q301	8-729-900-74	TRANSISTOR DTC143TS
Q302	8-729-606-33	TRANSISTOR 2SC2603F
Q303	8-729-900-65	TRANSISTOR DTA144ES
Q304	8-729-801-93	TRANSISTOR 2SD1387
Q305	8-729-606-33	TRANSISTOR 2SC2603F
Q306	8-729-606-33	TRANSISTOR 2SC2603F
Q307	8-729-111-67	TRANSISTOR 2SB1094-L
Q308	8-729-606-33	TRANSISTOR 2SC2603F
Q309	8-729-606-33	TRANSISTOR 2SC2603F
Q310	8-729-606-33	TRANSISTOR 2SC2603F
Q401	8-729-900-89	TRANSISTOR DTC144ES
Q402	8-729-900-89	TRANSISTOR DTC144ES
Q403	8-729-900-65	TRANSISTOR DTA144ES
Q404	8-729-900-65	TRANSISTOR DTA144ES
Q405	8-729-900-65	TRANSISTOR DTA144ES
Q406	8-729-900-65	TRANSISTOR DTA144ES
Q407	8-729-900-65	TRANSISTOR DTA144ES
Q408	8-729-900-74	TRANSISTOR DTC143TS
Q409	8-729-900-74	TRANSISTOR DTC143TS
Q502	8-729-900-89	TRANSISTOR DTC144ES
Q503	8-729-111-67	TRANSISTOR 2SB1094-L
Q504	8-729-802-34	TRANSISTOR 2SD1388
Q505	8-729-606-33	TRANSISTOR 2SC2603F
Q506	8-729-117-54	TRANSISTOR 2SA1175
Q507	8-729-180-92	TRANSISTOR 2SD809-K
Q508	8-729-900-64	TRANSISTOR DTA144ES
Q509	8-729-606-33	TRANSISTOR 2SC2603F
Q510	8-729-606-33	TRANSISTOR 2SC2603F
Q511	8-729-900-89	TRANSISTOR DTC144ES
Q513	8-729-900-89	TRANSISTOR DTC144ES
Q514	8-729-900-61	TRANSISTOR DTA144ES
Q515	8-729-900-61	TRANSISTOR DTA144ES
Q516	8-729-900-61	TRANSISTOR DTA144ES
Q518	8-729-801-93	TRANSISTOR 2SD1387

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q519	8-729-900-74	TRANSISTOR DTC143TS
Q520	8-729-900-80	TRANSISTOR DTC144ES
Q522	8-729-900-61	TRANSISTOR DTA144ES
Q523	8-729-801-93	TRANSISTOR 2SD1387
Q524	8-729-900-61	TRANSISTOR DTA144ES
Q525	8-729-801-93	TRANSISTOR 2SD1387
Q526	8-729-900-65	TRANSISTOR DTA144ES
Q527	8-729-900-65	TRANSISTOR DTA144ES
Q528	8-729-900-80	TRANSISTOR DTC144ES
Q529	8-729-802-22	TRANSISTOR 2SB1014
Q530	8-729-801-93	TRANSISTOR 2SD1387
Q531	8-729-801-83	TRANSISTOR 2SB1013
Q532	8-729-801-83	TRANSISTOR 2SB1013
Q533	8-729-801-93	TRANSISTOR 2SD1387
Q534	8-729-801-93	TRANSISTOR 2SD1387
Q535	8-729-801-83	TRANSISTOR 2SB1013
Q536	8-729-801-83	TRANSISTOR 2SB1013
Q537	8-729-801-83	TRANSISTOR 2SB1013
Q538	8-729-801-93	TRANSISTOR 2SD1387
Q539	8-729-801-93	TRANSISTOR 2SD1387
Q540	8-729-801-83	TRANSISTOR 2SB1013
Q541	8-729-801-93	TRANSISTOR 2SD1387
Q543	8-729-900-65	TRANSISTOR DTA144ES
Q544	8-729-900-65	TRANSISTOR DTA144ES
Q545	8-729-900-74	TRANSISTOR DTC143TS
Q546	8-729-606-33	TRANSISTOR 2SC2603F
Q547	8-729-606-33	TRANSISTOR 2SC2603F
Q548	8-729-900-89	TRANSISTOR DTC144ES
Q551	8-729-900-74	TRANSISTOR DTC143TS
Q901	1-807-509-11	PHOTO SENSOR
Q902	1-807-509-11	PHOTO SENSOR
R101	1-249-437-11	CARBON 47K 5% 1/6W
R102	1-249-419-11	CARBON 1.5K 5% 1/6W
R103	1-249-433-11	CARBON 22K 5% 1/6W
R104	1-247-815-00	CARBON 220 5% 1/6W
R105	1-249-415-11	CARBON 680 5% 1/6W
R106	1-249-419-11	CARBON 1.5K 5% 1/6W
R107	1-249-417-11	CARBON 1K 5% 1/6W
R108	1-249-417-11	CARBON 1K 5% 1/6W
R109	1-249-417-11	CARBON 1K 5% 1/6W
R110	1-247-846-00	CARBON 4.3K 5% 1/6W
R111	1-249-422-11	CARBON 2.7K 5% 1/6W
R113	1-247-851-00	CARBON 6.8K 5% 1/6W
R114	1-249-429-11	CARBON 10K 5% 1/6W
R115	1-247-839-00	CARBON 2.2K 5% 1/6W
R116	1-249-429-11	CARBON 10K 5% 1/6W
R117	1-247-839-00	CARBON 2.2K 5% 1/6W
R118	1-249-441-11	CARBON 100K 5% 1/6W
R119	1-247-887-00	CARBON 220K 5% 1/6W
R121	1-249-441-11	CARBON 100K 5% 1/6W
R122	1-249-420-11	CARBON 1.8K 5% 1/6W
R123	1-247-813-00	CARBON 180 5% 1/6W
R124	1-247-851-00	CARBON 6.8K 5% 1/6W
R125	1-247-849-00	CARBON 5.6K 5% 1/6W
R126	1-249-422-11	CARBON 2.7K 5% 1/6W
R127	1-247-823-00	CARBON 470 5% 1/6W
R128	1-249-420-11	CARBON 1.8K 5% 1/6W
R129	1-247-815-00	CARBON 220 5% 1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R130	1-247-849-00	CARBON 5.6K 5% 1/6W
R132	1-249-422-11	CARBON 2.7K 5% 1/6W
R134	1-249-429-11	CARBON 10K 5% 1/6W
R135	1-247-893-00	CARBON 390K 5% 1/6W
R136	1-247-883-00	CARBON 150K 5% 1/6W
R137	1-247-848-00	CARBON 5.1K 5% 1/6W
R138	1-249-405-11	CARBON 100 5% 1/6W
R139	1-247-839-00	CARBON 2.2K 5% 1/6W
R140	1-247-842-00	CARBON 3K 5% 1/6W
R141	1-247-887-00	CARBON 220K 5% 1/6W
R142	1-247-830-00	CARBON 910 5% 1/6W
R143	1-247-887-00	CARBON 220K 5% 1/6W
R144	1-247-875-00	CARBON 68K 5% 1/6W
R145	1-247-883-00	CARBON 150K 5% 1/6W
R146	1-247-848-00	CARBON 5.1K 5% 1/6W
R147	1-249-405-11	CARBON 100 5% 1/6W
R148	1-247-839-00	CARBON 2.2K 5% 1/6W
R149	1-247-842-00	CARBON 3K 5% 1/6W
R150	1-247-887-00	CARBON 220K 5% 1/6W
R151	1-249-441-11	CARBON 100K 5% 1/6W
R152	1-249-441-11	CARBON 100K 5% 1/6W
R153	1-249-419-11	CARBON 1.5K 5% 1/6W
R154	1-249-417-11	CARBON 1K 5% 1/6W
R155	1-249-417-11	CARBON 1K 5% 1/6W
R156	1-249-441-11	CARBON 100K 5% 1/6W
R157	1-249-437-11	CARBON 47K 5% 1/6W
R158	1-249-419-11	CARBON 1.5K 5% 1/6W
R159	1-249-441-11	CARBON 100K 5% 1/6W
R161	1-247-839-00	CARBON 2.2K 5% 1/6W
R162	1-249-417-11	CARBON 1K 5% 1/6W
R163	1-249-423-11	CARBON 3.3K 5% 1/6W
R164	1-249-435-11	CARBON 33K 5% 1/6W
R165	1-249-435-11	CARBON 33K 5% 1/6W
R166	1-249-432-11	CARBON 18K 5% 1/6W
R169	1-249-423-11	CARBON 3.3K 5% 1/6W
R170	1-247-851-00	CARBON 6.8K 5% 1/6W
R201	1-249-437-11	CARBON 47K 5% 1/6W
R202	1-249-419-11	CARBON 1.5K 5% 1/6W
R203	1-249-433-11	CARBON 22K 5% 1/6W
R204	1-247-815-00	CARBON 220 5% 1/6W
R205	1-249-415-11	CARBON 680 5% 1/6W
R206	1-249-419-11	CARBON 1.5K 5% 1/6W
R207	1-249-417-11	CARBON 1K 5% 1/6W
R208	1-249-417-11	CARBON 1K 5% 1/6W
R209	1-249-417-11	CARBON 1K 5% 1/6W
R210	1-247-846-00	CARBON 4.3K 5% 1/6W
R211	1-249-422-11	CARBON 2.7K 5% 1/6W
R213	1-247-851-00	CARBON 6.8K 5% 1/6W
R214	1-249-429-11	CARBON 10K 5% 1/6W
R215	1-247-839-00	CARBON 2.2K 5% 1/6W
R216	1-249-429-11	CARBON 10K 5% 1/6W
R217	1-247-839-00	CARBON 2.2K 5% 1/6W
R218	1-249-441-11	CARBON 100K 5% 1/6W
R219	1-247-887-00	CARBON 220K 5% 1/6W
R221	1-249-441-11	CARBON 100K 5% 1/6W
R222	1-249-420-11	CARBON 1.8K 5% 1/6W
R223	1-247-813-00	CARBON 180 5% 1/6W

FH-55W/50WX
TC-55W/50WX

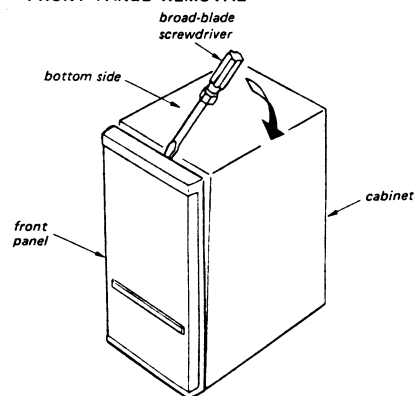
FH-55W/50WX
TC-55W/50W

ELECTRICAL PARTS					
Ref.No.	Part No.	Description			
R224	1-247-851-00	CARBON	6.8K	5%	1/6W
R225	1-247-849-00	CARBON	5.6K	5%	1/6W
R226	1-249-422-11	CARBON	2.7K	5%	1/6W
R227	1-247-823-00	CARBON	470	5%	1/6W
R228	1-249-420-11	CARBON	1.8K	5%	1/6W
R229	1-247-815-00	CARBON	220	5%	1/6W
R230	1-247-849-00	CARBON	5.6K	5%	1/6W
R232	1-249-422-11	CARBON	2.7K	5%	1/6W
R234	1-249-429-11	CARBON	10K	5%	1/6W
R235	1-247-893-00	CARBON	390K	5%	1/6W
R236	1-247-883-00	CARBON	150K	5%	1/6W
R237	1-247-848-00	CARBON	5.1K	5%	1/6W
R238	1-249-405-11	CARBON	100	5%	1/6W
R239	1-247-839-00	CARBON	2.2K	5%	1/6W
R240	1-247-842-00	CARBON	3K	5%	1/6W
R241	1-247-887-00	CARBON	220K	5%	1/6W
R242	1-247-830-00	CARBON	910	5%	1/6W
R243	1-247-887-00	CARBON	220K	5%	1/6W
R244	1-247-875-00	CARBON	68K	5%	1/6W
R245	1-247-883-00	CARBON	150K	5%	1/6W
R246	1-247-848-00	CARBON	5.1K	5%	1/6W
R247	1-249-405-11	CARBON	100	5%	1/6W
R248	1-247-839-00	CARBON	2.2K	5%	1/6W
R249	1-247-842-00	CARBON	3K	5%	1/6W
R250	1-247-887-00	CARBON	220K	5%	1/6W
R251	1-249-441-11	CARBON	100K	5%	1/6W
R252	1-249-441-11	CARBON	100K	5%	1/6W
R253	1-249-419-11	CARBON	1.5K	5%	1/6W
R254	1-249-417-11	CARBON	1K	5%	1/6W
R255	1-249-417-11	CARBON	1K	5%	1/6W
R256	1-249-441-11	CARBON	100K	5%	1/6W
R257	1-249-437-11	CARBON	47K	5%	1/6W
R258	1-249-419-11	CARBON	1.5K	5%	1/6W
R259	1-249-441-11	CARBON	100K	5%	1/6W
R261	1-247-839-00	CARBON	2.2K	5%	1/6W
R262	1-249-417-11	CARBON	1K	5%	1/6W
R263	1-249-423-11	CARBON	3.3K	5%	1/6W
R264	1-249-435-11	CARBON	33K	5%	1/6W
R265	1-249-435-11	CARBON	33K	5%	1/6W
R266	1-249-432-11	CARBON	18K	5%	1/6W
R269	1-249-423-11	CARBON	3.3K	5%	1/6W
R270	1-247-851-00	CARBON	6.8K	5%	1/6W
R301	1-247-704-11	CARBON	220	5%	1/4W
R302	1-247-903-00	CARBON	1M	5%	1/6W
R303	1-249-405-11	CARBON	100	5%	1/6W
R304	1-247-887-00	CARBON	220K	5%	1/6W
R305	1-214-777-00	METAL	100K	1%	1/4W
R306	1-249-429-11	CARBON	10K	5%	1/6W
R308	1-247-819-00	CARBON	330	5%	1/6W
R309	1-249-437-11	CARBON	47K	5%	1/6W
R310	1-249-437-11	CARBON	47K	5%	1/6W
R311	1-249-423-11	CARBON	3.3K	5%	1/6W
R312	1-249-441-11	CARBON	100K	5%	1/6W
R313	1-247-704-11	CARBON	220	5%	1/4W
R314	1-247-704-11	CARBON	220	5%	1/4W
R315	1-249-425-11	CARBON	4.7K	5%	1/6W
R316	1-247-859-00	CARBON	15K	5%	1/6W

ELECTRICAL PARTS					
Ref.No.	Part No.	Description			
R317	1-249-425-11	CARBON	4.7K	5%	1/6W
R318	1-247-849-00	CARBON	5.6K	5%	1/6W
R319	1-247-842-00	CARBON	3K	5%	1/6W
R320	1-247-811-00	CARBON	150	5%	1/6W
R321	1-249-429-11	CARBON	10K	5%	1/6W
R322	1-249-434-11	CARBON	27K	5%	1/6W
R323	1-247-857-00	CARBON	12K	5%	1/6W
R324	1-247-857-00	CARBON	12K	5%	1/6W
R325	1-247-857-00	CARBON	12K	5%	1/6W
R326	1-247-080-00	CARBON	5.6	5%	1/4W F
R327	1-247-839-00	CARBON	2.2K	5%	1/6W
R328	1-247-839-00	CARBON	2.2K	5%	1/6W
R329	1-247-839-00	CARBON	2.2K	5%	1/6W
R330	1-249-417-11	CARBON	1K	5%	1/6W
R331	1-249-437-11	CARBON	47K	5%	1/6W
R332	1-249-435-11	CARBON	33K	5%	1/6W
R333	1-247-859-00	CARBON	15K	5%	1/6W
R334	1-247-839-00	CARBON	2.2K	5%	1/6W
R335	1-249-429-11	CARBON	10K	5%	1/6W
R336	1-249-405-11	CARBON	100	5%	1/6W
R401	1-249-437-11	CARBON	47K	5%	1/6W
R402	1-247-857-00	CARBON	12K	5%	1/6W
R403	1-247-846-00	CARBON	4.3K	5%	1/6W
R404	1-247-858-00	CARBON	13K	5%	1/6W
R405	1-249-425-11	CARBON	4.7K	5%	1/6W
R406	1-247-857-00	CARBON	12K	5%	1/6W
R407	1-249-429-11	CARBON	10K	5%	1/6W
R408	1-249-432-11	CARBON	18K	5%	1/6W
R409	1-247-833-00	CARBON	1.2K	5%	1/6W
R410	1-247-875-00	CARBON	68K	5%	1/6W
R411	1-247-887-00	CARBON	220K	5%	1/6W
R412	1-249-441-11	CARBON	100K	5%	1/6W
R413	1-249-423-11	CARBON	3.3K	5%	1/6W
R414	1-249-441-11	CARBON	100K	5%	1/6W
R415	1-247-887-00	CARBON	220K	5%	1/6W
R416	1-249-429-11	CARBON	10K	5%	1/6W
R417	1-249-441-11	CARBON	100K	5%	1/6W
R502	1-249-441-11	CARBON	100K	5%	1/6W
R503	1-247-226-00	CARBON	270	5%	1/2W
R504	1-247-226-00	CARBON	270	5%	1/2W
R505	1-249-441-11	CARBON	100K	5%	1/6W
R506	1-249-425-11	CARBON	4.7K	5%	1/6W
R507	1-249-429-11	CARBON	10K	5%	1/6W
R508	1-249-420-11	CARBON	1.8K	5%	1/6W
R509	1-247-839-00	CARBON	2.2K	5%	1/6W
R510	1-249-417-11	CARBON	1K	5%	1/6W
R511	1-247-823-00	CARBON	470	5%	1/6W
R512	1-249-425-11	CARBON	4.7K	5%	1/6W
R513	1-249-425-11	CARBON	4.7K	5%	1/6W
R514	1-249-425-11	CARBON	4.7K	5%	1/6W
R515	1-249-425-11	CARBON	4.7K	5%	1/6W
R516	1-249-425-11	CARBON	4.7K	5%	1/6W
R517	1-249-425-11	CARBON	4.7K	5%	1/6W
R518	1-249-425-11	CARBON	4.7K	5%	1/6W
R520	1-249-437-11	CARBON	47K	5%	1/6W
R524	1-249-417-11	CARBON	1K	5%	1/6W
R525	1-249-417-11	CARBON	1K	5%	1/6W

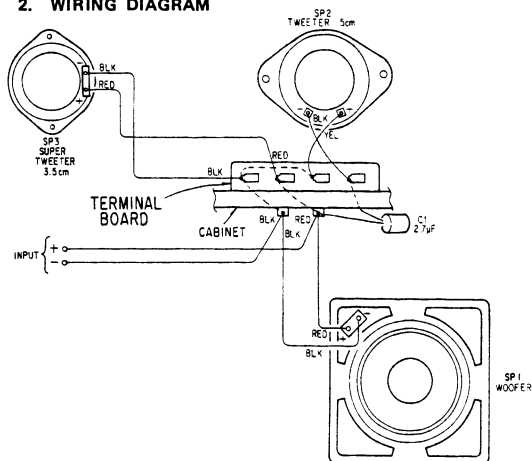
ELECTRICAL PARTS					
Ref.No.	Part No.	Description			
R526	1-247-815-00	CARBON	220	5%	1/6W
R527	1-249-434-11	CARBON	27K	5%	1/6W
R528	1-249-441-11	CARBON	100K	5%	1/6W
R529	1-249-429-11	CARBON	10K	5%	1/6W
R530	1-247-815-00	CARBON	220	5%	1/6W
R531	1-249-434-11	CARBON	27K	5%	1/6W
R532	1-249-441-11	CARBON	100K	5%	1/6W
R533	1-249-429-11	CARBON	10K	5%	1/6W
R534	1-249-429-11	CARBON	10K	5%	1/6W
R535	1-247-833-00	CARBON	1.2K	5%	1/6W
R536	1-249-429-11	CARBON	10K	5%	1/6W
R537	1-249-429-11	CARBON	10K	5%	1/6W
R538	1-247-833-00	CARBON	1.2K	5%	1/6W
R539	1-249-429-11	CARBON	10K	5%	1/6W
R540	1-249-429-11	CARBON	10K	5%	1/6W
R541	1-249-434-11	CARBON	27K	5%	1/6W
R542	1-249-434-11	CARBON	27K	5%	1/6W
R543	1-249-434-11	CARBON	27K	5%	1/6W
R544	1-249-434-11	CARBON	27K	5%	1/6W
R545	1-249-429-11	CARBON	10K	5%	1/6W
R546	1-247-783-00	CARBON	10	5%	1/6W
R547	1-247-783-00	CARBON	10	5%	1/6W
R548	1-247-783-00	CARBON	10	5%	1/6W
R550	1-249-441-11	CARBON	100K	5%	1/6W
R551	1-249-441-11	CARBON	100K	5%	1/6W
R552	1-249-441-11	CARBON	100K	5%	1/6W
R554	1-247-833-00	CARBON	1.2K	5%	1/6W
R555	1-247-829-00	CARBON	820	5%	1/6W
R556	1-249-417-11	CARBON	1K	5%	1/6W
R557	1-249-417-11	CARBON	1K	5%	1/6W
R558	1-249-417-11	CARBON	1K	5%	1/6W
R559	1-249-417-11	CARBON	1K	5%	1/6W
R560	1-247-829-00	CARBON	820	5%	1/6W
R561	1-247-823-00	CARBON	470	5%	1/6W
R562	1-249-417-11	CARBON	1K	5%	1/6W
R563	1-249-417-11	CARBON	1K	5%	1/6W
R564	1-249-417-11	CARBON	1K	5%	1/6W
R565	1-249-417-11	CARBON	1K	5%	1/6W
R566	1-247-829-00	CARBON	820	5%	1/6W
R567	1-247-823-00	CARBON	470	5%	1/6W
R568	1-247-829-00	CARBON	820	5%	1/6W
R569	1-249-441-11	CARBON	100K	5%	1/6W
R570	1-249-441-11	CARBON	100K	5%	1/6W
R571	1-249-441-11	CARBON	100K	5%	1/6W
R573	1-247-903-00	CARBON	1M	5%	1/6W
R574	1-247-823-00	CARBON	470	5%	1/6W
R575	1-249-429-11	CARBON	10K	5%	1/6W
R576	1-249-429-11	CARBON	10K	5%	1/6W
R577	1-249-441-11	CARBON	100K	5%	1/6W
R578	1-249-441-11	CARBON	100K	5%	1/6W
R579	1-247-851-00	CARBON	6.8K	5%	1/6W
R580	1-247-889-00	CARBON	270K	5%	1/6W
R581	1-249-415-11	CARBON	680	5%	1/6W
R582	1-247-808-00	CARBON	110	5%	1/6W
R583	1-247-808-00	CARBON	110	5%	1/6W
R584	1-249-423-11	CARBON	3.3K	5%	1/6W
R585	1-249-429-11	CARBON	10K	5%	1/6W
R588	1-249-441-11	CARBON	100K	5%	1/6W

ELECTRICAL PARTS					
Ref.No.	Part No.	Description			
R589	1-249-429-11	CARBON	10K	5%	1/6W
R590	1-247-889-00	CARBON	270K	5%	1/6W
R591	1-247-889-00	CARBON	270K	5%	1/6W
R592	1-247-842-00	CARBON	3K	5%	1/6W
R593	1-247-842-00	CARBON	3K	5%	1/6W
R596	1-247-845-00	CARBON	3.9K	5%	1/6W
R602	1-247-803-00	CARBON	68	5%	1/6W
R604	1-247-805-00	CARBON	82	5%	1/6W
R606	1-247-803-00	CARBON	68	5%	1/6W
R607	1-247-803-00	CARBON	68	5%	1/6W
RV101	1-230-631-11	RES, ADJ, CARBON 22K			
RV102	1-230-631-11	RES, ADJ, CARBON 22K			
RV103	1-230-630-11	RES, ADJ, CARBON 10K			
RV201	1-230-631-11	RES, ADJ, CARBON 22K			
RV202	1-230-631-11	RES, ADJ, CARBON 22K			
RV203	1-230-630-11	RES, ADJ, CARBON 10K			
RV501	1-230-721-11	RES, ADJ, CARBON 10K			
RV502	1-230-720-11	RES, ADJ, CARBON 4.7K			
RV503	1-230-721-11	RES, ADJ, CARBON 10K			
RV504	1-230-720-11	RES, ADJ, CARBON 4.7K			
RY301	1-515-535-11	RELAY			
S1	1-570-720-11	SWITCH, PUSH (1 KEY)			
S2	1-570-720-11	SWITCH, PUSH (1 KEY)			
S3	1-570-720-11	SWITCH, PUSH (1 KEY)			
S4	1-570-720-11	SWITCH, PUSH (1 KEY)			
S5	1-570-723-11	SWITCH, PUSH (1 KEY)			
S6	1-570-723-11	SWITCH, PUSH (1 KEY)			
S7	1-570-719-11	SWITCH, LEAF			
S8	1-570-719-11	SWITCH, LEAF			
S301	1-554-277-00	SWITCH, SLIDE (ISS 1)			
S302	1-554-078-21	SWITCH, SLIDE (DOLBY NR)			
S501	1-554-168-00	SWITCH, SLIDE (TIMER)			
S503	1-554-277-00	SWITCH, SLIDE (ISS 2)			
S601	1-553-856-00	SWITCH, KEY BOARD (DUBBING NORM)			
S602	1-553-856-00	SWITCH, KEY BOARD (DUBBING HIGH)			
S603	1-553-856-00	SWITCH, KEY BOARD (REW/A)			
S605	1-553-856-00	SWITCH, KEY BOARD (STOP/A)			
S606	1-553-856-00	SWITCH, KEY BOARD (PLAY/A)			
S607	1-553-856-00	SWITCH, KEY BOARD (FF/A)			
S608	1-553-856-00	SWITCH, KEY BOARD (AMS/A)			
S609	1-553-856-00	SWITCH, KEY BOARD (REC MUTE/B)			
S610	1-553-856-00	SWITCH, KEY BOARD (PAUSE/B)			
S611	1-553-856-00	SWITCH, KEY BOARD (REC/B)			
S612	1-553-856-00	SWITCH, KEY BOARD (FF/B)			
S613	1-553-856-00	SWITCH, KEY BOARD (PLAY/B)			
S614	1-553-856-00	SWITCH, KEY BOARD (STOP/B)			
S615	1-553-856-00	SWITCH, KEY BOARD (REW/B)			
T301	1-433-313-11	TRANSFORMER, BIAS OSCILLATION			
TP301	1-230-631-11	RES, ADJ, CARBON 22K			
TP501	1-230-722-11	RES, ADJ, CARBON 22K			
TP502	1-230-724-11	RES, ADJ, CARBON 100K			

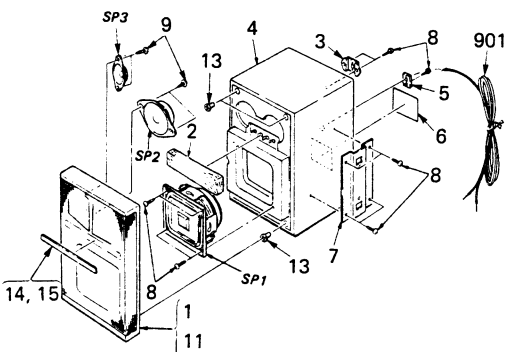
SPEAKER SYSTEM
〔APM-117D〕1. DISASSEMBLY
FRONT PANEL REMOVAL

Note: Be careful not to scratch the cabinet.

2. WIRING DIAGRAM



3. EXPLODED VIEW AND PARTS LIST



No.	Part No.	Description
1	X-4910-065-1	PANEL (LEFT) ASSY, FRONT
2	*4-910-045-01	ABSORBENT (C), ACOUSTIC
3	*4-883-959-01	HOOK
4	X-4910-060-1	CABINET ASSY, SPEAKER
5	*4-914-347-01	CLAMP
6	*4-914-336-01	LABEL, MODEL NUMBER
7	*4-902-981-11	PLATE (B), SIDE
8	4-874-614-11	SCREW (4) (3.5X14), TAPPING
9	7-685-646-71	SCREW +BVTP 3X8 TYPE2 SLIT
11	X-4910-065-1	PANEL (RIGHT) ASSY, FRONT
13	*4-872-922-02	CATCHER
14	4-914-339-01	PLATE (LEFT), ORNAMENTAL
15	4-914-342-01	PLATE (RIGHT), ORNAMENTAL

ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	1-558-547-11	CORD, SPEAKER CONNECTION
C1	1-123-545-00	ELECT 2.7MF 20% 50V
SP1	8-927-269-00	SPEAKER UNIT 070A017
SP2	1-503-590-11	SPEAKER (5CM CONE TYPE)
SP3	1-503-591-11	SPEAKER (3.5CM)

-APM-1-

TROUBLE CHECKS

RADIO PROGRAM RECEPTION

The TUNED indication flickers.	• Adjust the antenna.
The STEREO indicator flickers.	• Adjust the antenna.
Severe hum or noise	• The signal strength is too weak. • Adjust the antenna. • Connect the ground wire.

CASSETTE DECK OPERATION

The ● button cannot be activated.	• No cassette in the cassette holder. • The tab is removed from the cassette.
The ● button or ► button cannot be activated.	• The tape is wound completely.
Tape does not move even when the ► button is activated (deck B).	• The ■ button is activated.
Recording or playback cannot be made or there is a decrease in sound level.	• Dirty heads. • Magnetic built-up on the record/playback head.
The SYNCHRO DUBBING button cannot be activated.	• No cassette in deck A or B.
The indicator of the HIGH or NORMAL SYNCHRO DUBBING button blinks.	• The tab of the cassette in deck B is removed.
Tape does not move when the SYNCHRO DUBBING button is pressed.	• The tape is completely wound. • The ■ button is pressed and the ■ indicator lights.
Excessive wow or flutter, or sound drop-out.	• Contamination of the capstan or pinch roller.
Insufficient erasure.	• Magnetic built-up on the erase head.
Increase of noise of erasure of high frequencies.	• Magnetic built-up on the erase head.
Unbalanced tone in higher frequencies.	• Improper setting of the DOLBY NR switch.
Incorrect AMS or blank skip operation.	• Blank space between the selections may be too short. • Press the AMS/BLANK SKIP button before starting tape motion.

TIMER OPERATION

Radio or taped program sound does not come on at the preset time.	• Check the current time and alarm time. • Confirm that the TIMER standby switch is set to PLAY.
Recording can not be made at the preset time.	• Confirm that the TIMER standby switch is set to REC.

GENERAL

No audio	• Slide the VOLUME control to the right.
No audio from one channel or unbalanced left and right volume	• Adjust the BALANCE control. • Check the speaker connections of the inoperative channel.
Reversed left and right sound	• Check the speaker cord connection and speaker location.
Lack of bass sound or apparently imprecise physical location of musical instruments	• Check the speaker connection for proper phasing.
No microphone sound	• Slide the MIC LEVEL control upwards.
Severe hum or noise	• The TV or VTR is too close to the stereo system. • Separate the stereo system from the TV or VTR.

Sony Corporation

9-952-492-21